

DAVID W. TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER



Bethesda, Maryland 20084-5000



INDEX OF ORAL HISTORIES RELATING TO
NAVAL RESEARCH AND DEVELOPMENT

by

Carole Elizabeth Nowicke David K. Allison Peter S. Buchanan

APPROVED FOR PUBLIC RELEASE. DISTRIBUTION UNLIMITED

SUPPORT AND ADMINISTRATIVE SERVICES DEPARTMENT NAVAL MATERIAL COMMAND HISTORICAL REPORT

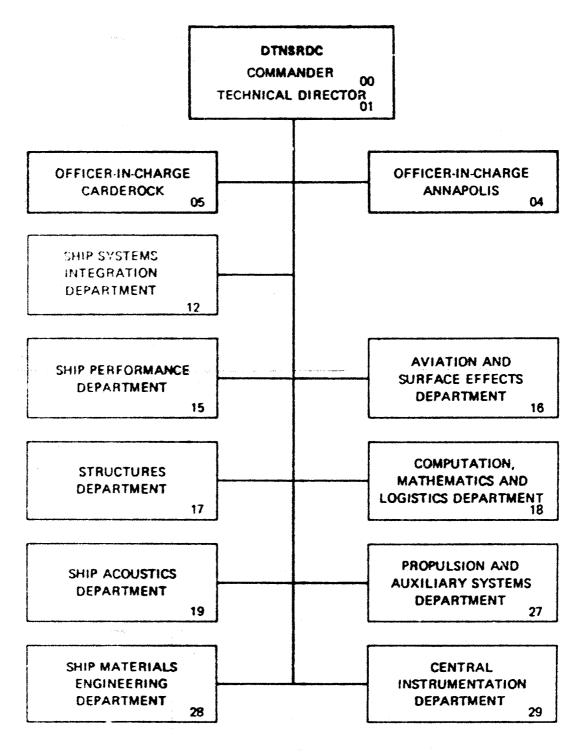


January 1985

DTNSRDC-85/CT02

5

MAJOR DTNSRDC ORGANIZATIONAL COMPONENTS



UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Date Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM			
1. REPORT NUMBER		3. RECIPIENT'S CATALOG NUMBER			
DTNSRDC-85/CT02	AD-A154980				
4. TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERED			
INDEX OF ORAL HISTORIES RELATING TO		Final			
NAVAL RESEARCH AND DEVELOPMENT		6. PERFORMING ORG. REPORT NUMBER			
7. Author(*) Carole Elizabeth Nowicke		S. CONTRACT OR GRANT NUMBER(s)			
David K. Allison					
Peter S. Buchanan					
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS			
David W. Taylor Naval Ship Research and		Program Element 65681N			
Development Center Bethesda, Maryland 20084-5000		Task Area Z0832			
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE				
Director of Navy Laboratories		January 1985			
Naval Material Command		13. NUMBER OF PAGES			
Washington, D.C. 20360		290			
14. MONITORING AGENCY NAME & ADDRESS(If differen	t from Controlling Office)	15. SECURITY CLASS. (of this report)			
		UNCLASSIFIED			
		154. DECLASSIFICATION DOWNGRADING			
		SCHEDOLE			
16. DISTRIBUTION STATEMENT (of this Report)					
APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED 17. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, If different from Report)					
18. SUPPLEMENTARY NOTES					
		ł			
		l			
19. KEY WORDS (Continue on reverse side if necessary an	d identify by block number)				
- Military History, Naval Research and Development,					
Naval History, Oral History					
Naval Research Laboratories,					
Naval Laboratory Management,		· ·			
20. ABSTRACT (Continue on reverse elde if necessary and identify by block number)					
This report is a comprehensive index and guide to oral histories on naval research and development. Tapes and transcripts of the interviews, prepared during the past twenty years, are held in Navy, Federal Government, and nongovernmental respositories. Abstracts and indices by name and subject have been prepared for each interview. The report includes contact points at repositories holding the materials, and an acronym and abbreviation list.					
-> cont beywords include: -					

DD 1 JAN 72 1473 EDITION OF 1 NOV 65 IS OBSOLETE 5/N 0102- LF- 014- 6601

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (Shen Deta Entered)

INDEX OF ORAL HISTORIES RELATED TO NAVY RESEARCH AND DEVELOPMENT

Acces	sion For			
NTIS	GRA&I			
DTIC	TAB T			
Unannounced				
Justification				
By				
	Avail and/or			
Dist	Special			
A-/				



TABLE OF CONTENTS

		Page
INTRODUCTION		 v-vii
LIST OF INTERVIEWEES		 ix-xiv
ORAL HISTORY INDEX		 1-221
CONTACT POINTS AT ORAL HISTORY	REPOSITORIES	 223-225
ACRONYMS AND ABBREVIATIONS		 227-230
NAME INDEX		 231-242
SUBJECT INDEX	· • • • • • • • • • • • • • • • • • • •	 243-256

INTRODUCTION

This guide resulted from an attempt to locate and describe all oral history interviews related to U. S. Navy research and development that are available in major U. S. repositories. In a sense, it is a companion to the broader U. S. Naval History Sources in the United States (Washington: U. S. Naval History Division, 1979), which primarily covers written documentation in all areas of Naval history, not just research and development.

The listing of an interview in this guide does not guarantee that it will be available to all researchers. Access restrictions vary from repository to repository, and they change over time. The guide indicates only the existence of oral histories. Provisions for access must be determined by contacting the repositories that hold the material.

Oral history has proven an attractive and useful tool for recording the history of Navy research and development. Of the many reasons for this, the most important is that the engineers, scientists, managers, and naval officers who have shaped the field over the years have generally considered technical reports and articles as the principal permanent records of their enterprise. For this material, there are reasonably reliable systems for access and preservation. Papers published in technical journals are indexed and may be identified through the use of abstracting services or on-line searches. The Defense Technical Information Center provides access to most post World War II technical reports written in the defense establishment. And most Navy R&D institutions maintain complete, indexed archival collections of the documentation that they have produced. However, the technical "result" literature, as this is sometimes called, gives a skewed, if not inaccurate picture of how naval research and development has actually evolved. The reason is that technical literature is not designed to give an accurate historical account of how things happened, but rather a logically reconstructed account of why results are

The care that those involved in naval research and development have devoted to preserving their technical publications has not generally extended to preserving good historical records that explain why work was done, how it was supported, how it progressed over time, the false starts encountered, the interpersonal relations that shaped research activities, and so on. One reason is that complete documentation is frequently not generated as programs advance. Throughout history, few technically minded people have felt compelled to maintain accurate diaries, and the routine practice of writing memoranda to file, keeping personal reflections or notes on meetings, or writing detailed, descriptive correspondence to their colleagues has

largely disappeared. Indeed it is a sad irony that increasingly less historically valuable documentation is generated even as the quantity of administrative paperwork scientists and engineers prepare about their work has increased. A second, more troubling reason for inadquate historical documentation is that research and development institutions have not made serious, professional attempts to ensure that the records that are prepared are subsequently identified, catalogued, and preserved so that they remain available and easily accessible.

Oral history is a valuable, if imperfect, means for filling some of the consequent gaps in the primary historical documentation. It is an effective way for capturing memories individuals have of key events, reflections on their own actions and motivations and also those of others, and judgments about the relative significance of policies, decisions, and interpersonal relationships. These retrospective views obviously lack the immediacy and authenticity of primary sources and cannot replace them. However recollection is far better than speculation, and used in conjunction with primary source material, can greatly enrich understanding of the past.

It is for these reasons that oral history has been used by historians, policy analysts, and management consultants who have needed, for a variety of different reasons, to understand aspects of the evolution of Navy research and development over the past several decades. The interviews they have conducted vary widely in depth and quality, but collectively, they are an extremely valuable resource that should be available to all who need to understand the subject. Meeting that need is the purpose of this guide.

The index entries should largely be self explanatory. Each begins with the name of the person or persons interviewed. A "title" follows, which gives the name of the interviewer. The remainder of each entry provides information about the interview, including its date, documentation, repositories holding it, and, when we were able to analyze the interview, an abstract and content analysis. You should note that the index is arranged alphabetically by name of the individual interviewed. When multiple interviewees were involved in a single interview, however, the full citation appears only once in the body. The text is supplemented by three indices. The first, which appears at the beginning of the work, is a complete list of all interviewees. In a sense, it is a table of contents. The other two indices, which appear at the rear of the volume, are a name index and a subject index. The name index includes both the names of interviewees and the names of individuals who were discussed to a significant degree in the interviews (the "individuals mentioned" entries in the

body). An * in this index indicates the that the person was actually interviewed, and the page on which the description of the interview begins. The subject index subsumes what, in the body, are broken into the subcategories of subject, institutions, cities, and other added entries. We thought the subcategorization in the body would be helpful to the user, but that multiple indices would be distracting. Finally, the volume includes a list of contact points at the repositories whose collections the guide covers.

This index is a first edition. As oral histories related to Navy research and development continue to be conducted, we hope to prepare revised versions of the guide. If you have suggestions about ways to improve it, or know about oral histories that it does not include but should, please let us know so that we can make subsequent issues better research tools.

D. K. Allison HISTORIAN OF NAVY LABORATORIES

November 1984

LIST OF INTERVIEWEES

Abrams, Robert, 1 Adams, A. J., 2 Adkins, Dr. John, 3 Agnew, Harold, 4 Alpers, Frederick C., 4 Alvarez, Dr. Luis W., 5 Amlie, Dr. Thomas S., 6, 7 Anderson, Evan, 8 Andrews, Dr. Dan, 9 Andrews, RADM B. F., 9 Ashworth, VADM Frederick L., 9, 10 Bainbridge, Dr. Kenneth Tompkins, 11 Baker, Walter L., 12 Baldwin, Dr. Ralph B., 2 Ballentine, ADM John Jennings, 12 Barnaby, CAPT Ralph, 13 Bastedo, George, 14 Baum, Dr. William A., 13 Beach, CAPT Edward Latimer, 16 Beach, Dr. Eugene H., 15 Beckmann, CAPT Alcorn G., 16 Bergstralh, Thor, 17 Berman, Dr. Alan, 18, 19 Beshany, VADM Philip A., 19 Birch, Dr. A. Francis, 20 Black, CAPT Robert G., 21 Blood, Dr. Howard, 21 Bodenburg, John, 22 Bolt, Dr. Richard Henry, 23 Bowen, Dr. Edward G., 23 Bowen, Dr. Ira S., 25 Bowen, Harold G., Jr., 25 Bowen, VADM Harold G., 24 Bowyer, Dr. C. Stewart, 26 Bradbury, Dr. Norris E., 26 Bramble, Dr. Charles C., 27 Braun, RADM Boynton L., 28 Breslow, Arthur, 28 Brode, Dr. Wallace C., 29 Brooks, Dr. Harvey, 30 Bryan, Dr. Glenn L., 30 Burke, ADM Arleigh A., 2, 31 Burns, Dr. Robert O., 32 Burroughs, Kay (Mrs. Sherman E.), 32 Burroughs, Mrs. Robert (former Mrs. William S. Parsons), 33 Burroughs, RADM Sherman E., 34 Byrum, E. T., 35 Camp, Victor W., 35 Carome, Dr. Edward F., 36 Carstater, Dr. Eugene D., 37 Cartwright, Dr. Frank W., 7 Christman, Albert B., 37 Chubb, Dr. Talbot A., 38

Cleeton, Dr. Claud E., 39 Clement, Lewis M., 2 Collins, Dr. John J., 40 Colvard, Dr. James E., 41 Connolly, VADM Thomas, 42 Cooper, Dr. Eugene P., 42 Couperus, Pierce G., 43 Cozzens, Ernest G., 43 Crary, Dr. Albert P., 44 Crawford, Jack A., 7 Crosbie, Richard, 44 Cummins, Dr. William E., 45, 46 Custer, CAPT Benjamin Scott, 47 Davis, Dr. Charles M., 47 Diehl, CAPT Walter S., 48 DiPol, C. John, 49 Donaldson, Earl J., 7 Drummeter, Dr. Louis F., 49 Duncan, ADM Donald, 50 Duncan, CAPT James, 50 Dunlap, Jack, 51 Ebaugh, Paul, 51 Ebbert, CAPT Edwin L., 52 Ekas, RADM Claude P., 52 Ellis, Dr. Emory L., 53, 54 Ellis, Marion (Mrs. Emory L.), 54 Entwistle, RADM Frederick I., 54 Eyster, Dr. Eugene H., 55 Fallgatter, Calvin J., 56 Ferguson, Mary, 56, 57 Fields, Dr. Victor, 58 Fitzpatrick, William, 59 Fletcher, Dr. Robert C., 4 Foladare, Dr. Joseph, 59 Ford, Curry, 2 Fowler, Dr. William, 60 Fresh, J. Norman, 61 Friedman, Dr. Herbert, 62 Friedman, Sidney, 63 Frosch, Dr. Robert A., 64, 65 Fuller, Mrs. Clarissa Parsons, 65 Furth, RADM Frederick R., 66 Gates, SECNAV Thomas S., 67 Gebhard, Dr. Louis A., 68 Giallorenzi, Dr. Thomas G., 67 Gleiter, Werner, 68 Goddard, Mrs. Robert, 69 Goss, Dr. Wilbur, 70 Gould, Gerald, 70 Gouldman, Harold M. Jr., 71 Gralla, VADM Arthur R., 71 Granum, RADM Alfred M., 72 Grodsky, Jim, 72

Groves, GEN Leslie, 73 Guthrie, Dr. Robert C., 73 Habicht, Frank, 74 Haff, CAPT William B., 75 Hafstad, Dr. Lawrence R., 2, 75 Hall, Dr. John L., 76 Hardy, CAPT John I., 76, 117 Hartmann, Dr. Gregory, 77 Harwit, Dr. Martin, 78, 79 Hattabaugh, William R., 80 Havens, Dr. Ralph J., 80 Hay, Marley Fotheringham, 81 Hayward, ADM John T., 81, 82, 83, 84 Henderson, J., 85 Henifin, CAPT Edward E., 85 Herget, Dr. Paul, 86 Highberg, Dr. Ivar E., 86 Hillyer, Robert, 87 Himes, Allen W., 88, 89 History of Radio-Radar-Sonar, 89 Hollings, Anthony J., 90 Hooker, Ruth, 91 Hooper, ADM Edwin B., 91, 92 Hopper, COMO Grace Brewster (Murray), 93 Howard, Jim, 94 Hulburt, Dr. Edward O., 95 Hunsaker, Jerome Clarke, 96 Hunt, F. L. "Pete", 96 Hunter, Dr. Hugh, 97, 98 Hussey, VADM George F., 2, 98, 99 Hustvedt, VADM Olaf M., 100 Jackson, VADM Andrew McBurney, Jr., 100 James, Richard, 101 Jennison, James H., 101, 102 Johnson, ADM Roy L., 106 Johnson, Charles Y., 103, 104 Johnson, Dr. Frances Severin, 105 Jones, Dr. Earl, 106 Keener, Charles E., 107 Keil, Dr. Alfred H., 108 Kelly, CAPT James F., 108 Kendig, Dr. Paul M., 109 Kirk, ADM Alan Goodrich, 110 Koesey, Calvin, 110 Kondracki, Henry, 78 Krause, Dr. Ernst H., 111 Kron, Dr. Gerald Edward, 112 Krutter, Dr. Harry, 112, 113 Kunz, D. A., 114 Land, ADM Emory S., 115 Landweber, Dr. Louis, 115 Langenbeck, Earl H., 116 Laser History, 117

Lauritsen, Dr. Charles C., 117, 118 Lauritsen, Dr. Thomas, 119 Law, Howard, 119 Lawson, Dr. Joel, 120 Lewis, Russell, 121 Lockhart, Dr. Luther, 122 Lockwood, VADM Charles A., 123 Lyddane, Dr. Russell H., 124 Martell, VADM Charles B., 129 Marten, William H., 130 Masterson, VADM Kleber S., 130 McDowell, Rensler, 123 McKibbin, Mrs. Joseph (Dorothy), 124 McLean, Dr. William B., 126, 127, 128 McLean, Edith LaVerne (Mrs. William B.), 125, 126 McMillan, Dr. Edwin M., 129 Meyers, Wesley W., 131 Miller, Laymon N., 132 Minter, Jerry, 2 Moran, VADM William J., 132 Morton, RADM Thomas, 133 Naval Research Laboratory Meeting, 133 Newell, Dr. Homer E., 134 Niedermair, John Charles, 135 Niemann, Ralph A., 135 Nutt, Mr. Harold V., 136 O'Neill, William, 137 Offenhauser, William, 2 Owen, RADM Thomas B., 138 Page, Dr. Robert Morris, 139 Parsons, Harry R., 140 Pearce, John, 2 Pehrson, Gordon, 141 Peterkin, Ernest W., 141 Petersen, ADM Forrest Silas, 142 Plain, Dr. Gilbert, 142 Polin, Jerry, 143, 144 Pollak, George, 144 Pollock, CAPT Thomas, 145, 146 Porter, Henry, 70 Powers, Kenneth, 146 Price, D. George, 147 Priori, Dr. E., 66 Probus, Dr. James H., 148 or, CAPT William L., 149 11, D., 150 GL_ s, Gilford G., 150 , VADM William F., Jr., 151 Ramra, Eugene M., 151 Ram y, Dr. Norman, 152 Ran ', Dr. William, 152 Rees Mina, 153 Regai, Dr. James J., 154

Reich, VADM Eli T., 155 Renard, RADM Jack C., 156 Renne, Clarence J., 157 Rexroth, John, 157 Rich, Harry L., 158 Richmond, CDR John, 160 Ricketts, COMO Myron V., 161 Roach, James, 161 Robert L. Hansen, 52 Robinson, ADM Samuel M., 162 Robinson, K. H., 117 Roman, Nancy Grace, 162 Rosen, Milton, 163 Roy, Dr. Max, 164 Ruckner, RADM Edward A., 164, 165 Russell, ADM James S., 166 Sagdahl, John, 167 Sage, Dr. Bruce, 167 Sanderson, Dr. John A., 168 Sandquist, CAPT Oscar, 168 Sawyer, Dr. Ralph A., 169, 170 Schneider, RADM R. J., 170 Schoeffel, RADM Malcom F., 171 Schoenherr, Dr. Karl E., 171 Schoman, Dr. Charles M., 172 Schreiber, J. Raymond, 7 Schwede, Harold, 2 Sette, Dr. William J., 173 Sewell, Robert G. S., 174 Seymour, Dr. Harry R., 176 Seymour, VADM Ernest R., 175, 176 Sheehy, Myles, 177 Sherwin, Dr. Chalmers, 177 Shugg, Carleton, 178 Smith, Bernard, 179, 180 Smith, Charles P., 7 Smith, Howard, 181 Smith, VADM Levering, 181 Smitley, Charles Raymond, 182 Snyder, RADM J. Edward, 183 Spangenburg, George, 183 Sprague, Robert C., 2 Stone, Dr. Harris B., 183 Stoner, Donald W., 184 Strand, Dr. Kai Aa., 185 Strauss, RADM Louis L., 185 Stump, ADM Felix Budwell, 186 Sullivan, ADM William, 186 Sykes, RADM James B., 187 Thompson, Arthur, 187 Thompson, Dr. Louis T. E., 99, 188, 189 Tibbitts, CAPT Barrick F., 190 Tousey, Dr. Richard, 190

Towle, CAPT Bernard, 191, 192 Tremblay, Harold, 193, 194 Trexler, James Hugh, 195 Trotter, Dr. Herbert, 2 Truax, CAPT Robert, 195 Upgren, A., 196 Van Allen, Dr. James, 196 Vossler, RADM Curtis F., 197 Wakelin, Dr. James H., 198 Walker, Eric A., 199 Ward, Dr. Newton E., 7, 199, 200 Warner, Dr. Arthur H., 200 Waterman, Dr. Peter, 201 Watson, Clement, 202 Watson, Dr. Earnest C., 201 Watson-Watt, Sir Robert Alexander, 203 Waynick, Arthur H., 203 Weaver, Dr. Warren, 204 Welford, Randolph, 204 White, Dr. Howard J., Jr., 205 Whitmarsh, David, 206 Wiegand, Dr. James, 206 Wilcox, Douglas, 207, 208 Wilcox, Dr. Howard A., 7, 208, 209, 210 Willey, Thomas, 210 Williams, ADM Henry, 211 Williams, ADM John G. Jr., 212 Wills, James R., 212 Wilson, CAPT Eugene Edward, 214 Wilson, Dr. Haskell G., 7, 213 Wingo, Carl H., Jr., 214 Winnick, Robert L., 215 Wislicenus, Dr. George F., 215 Withington, RADM Frederick S., 216 Wolff, Dr. Irving, 217 Worchesek, CAPT Robert R., 217 Word, Thomas J., 218 York, Dr. Herbert, 219 Young, Dr. Leo C., 219 Youngblood, Curtis, 220 Zisman, Dr. William A., 221

ORAL HISTORY INDEX

Abrams, Robert

Interview of Robert Alrams, conducted by Dr. David K. Allison

Date of Interview: 8210705

Documentation: 2 Tapes, Index 8 pp.

Abstract: Mr. Abrams reviews the history of the Office of the Director of Navy Laboratories, the creation of the office, the first personnel, selection of DNLs, and changes in the office over the past 17 years.

Repositories: DTNSRDC

Individuals mentioned: Kleback, Thomas
Volmut, Rosemary
Gralla, VADM Arthur R.
Towle, CAPT Bernard
Langille, CAPT John
Hughes, David
Johnson, Dr. Gerald
Teller, Dr. Edward
Frosch, Dr. Robert A.
Andrews, CAPT Albert
Smith, Howard
Huang, Theodore S.
Crook, Mary Charlotte
Parrish, CAPT David

Institutions: Bureau of Weapons
Navy Science Assistance Program
Bureau of Ordnance
Bureau of Ships
Naval Material Command
Director of Navy Laboratories
Deputy Chief of Naval Material (Laboratories)

Other added entries: Laboratory Management Dillon Study Hermann Study Reduction in Force Laboratory Consolidations Adams, A. J.
Baldwin, Dr. Ralph B.
Burke, ADM Arleigh A.
Clement, Lewis M.
Ford, Curry
Hafstad, Dr. Lawrence R.
Hussey, VADM George F.
Minter, Jerry
Offenhauser, William
Pearce, John
Schwede, Harold
Sprague, Robert C.
Trotter, Dr. Herbert

Transcript of Meeting on VT (Proximity) Fuze

Date of interview: 781117

Documentation: Transcript, 100 pp.

Abstract: This is a transcript of the Annual Conference of the Radio Club of America. The participants reminisce about their roles and the roles of their agencies in the development of the proximity fuze. The manufacturing process was highly compartmentalized, thus many interviews deal with components of the fuze - the batteries and capacitators, and differences in assembly line procedures at plants. ADM Burke discusses the actual use of the fuzes, Dr. Ralph B. Baldwin describes the effect of the fuze on the German war machine, several interviews are about testing at the Naval Proving Ground.

Repositories: NHC, DTNSRDC

Individuals mentioned: Robinson, Dr. Preston Tuve, Dr. Merle Parsons, RADM William S. Brooks, Dr. Lester Currie, Dr. Lauchlin M. McPherson, Dr. Herbert G.

Institutions: Applied Physics Laboratory
U. S. Army
Eastman Kodak Company
Naval Proving Ground
Hoover Company
Baldwin Piano Company
McQuay-Norris Corporation
Johns Hopkins University
Office of Scientific Research and Development
Crosley Corporation
Bureau of Ordnance
Department of Terrestrial Magnetism

Subjects: Ordnance Artillery

Cities: Pearl Harbor, HI.

Other added entries: Proximity Fuze

Adkins, Dr. John

Interview of Dr. John Adkins, conducted by Vincent Ponko, Jr.

Date of Interview: 810409

Documentation: 2 Tapes, Index, Transcript 48 pp.

Interview number: NL-T35

Abstract: Dr. Adkins talks about his first R&D appointment as head of Geophysics at the Office of Naval Research, his promotion to Assistant Chief Scientist of ONR, and studies of R&D during the McNamara Era. He discusses the work of the Naval Research Advisory Committee, the unilinear Navy, and Dr. Chalmers Sherwin and the Sherwin Plan for reorganizing the laboratories of the Department of Defense. Adkins also comments on the role of in-house laboratories in the Navy, the Mansfield Amendment, and the Blue Ribbon Defense Panel. He describes Navy Industrial Funding and Project REFLEX, ONR's relationship with other agencies and military-civilian relationships in the Navy. Adkins explains the impact of the creation of the National Science Foundation on the Office of Naval Research and the effect of centralized management on Navy Research and Development.

Repositories: DTNSRDC

Individuals mentioned: Kennedy, PRES John F. Sherwin, Dr. Chalmers

Institutions: Office of Naval Research Naval Research Advisory Committee

National Science Foundation

Other added entries: Glass Report Unilinear Navy Blue Ribbon Defense Panel Mansfield Amendment Sherwin Plan Project REFLEX Navy Industrial Fund Agnew, Harold

Interview of Mr. Harold Agnew, conducted by Albert B. Christman

Date of Interview: 670100

Documentation: Index, transcript 22 pp.

Interview number: NOTS-75201-S26

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Mr. Agnew discusses Parsons and Dr. Norman Ramsey at Tinian and the test flights from there. He also reflects on the uses of small nuclear weapons and the communication problems involved.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Ramsey, Dr. Norman

Cities: Los Alamos, NM.

Tinian

Other added entries: Manhattan Project

Alpers, Frederick C. Fletcher, Dr. Robert C.

Interview of Frederick C. Alpers and Dr. Robert C. Fletcher, conducted by Leroy L. Doig, III.

Date of Interview: 810127

Documentation: Index, transcribed, 89 pp.

Interview number: S-118

Abstract: Mr. Alpers details early missile work on the Bat and Pelican missiles at the National Bureau of Standards. He talks about German contributions to missile research, wartime supply problems, and postwar developments of Bat II and Corvus. Alpers discusses the search for nuclear weapons and the shift in missile research to the Naval Ordnance Laboratory at Corona, California. He mentions the later move of NOL-Corona to the Naval Weapons Center-China Lake and the work on Walleye II and Puma missiles. In addition,

Alpers explains the current trends in R&D and his contributions to the Naval Weapons Center.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B.

Riggs, Leroy

Institutions: Naval Ordnance Laboratory

National Bureau of Standards

Naval Weapons Center

Subjects: Missile Research

Other added entries: Bat II Missile

Corvus Missile Puma Missile Project

Walleye II Missile Project

Alvarez, Dr. Luis W.

Interview of Dr. Luis W. Alvarez, conducted by Albert B. Christman

Date of Interview: 670300

Documentation: Transcript 32 pp.

Interview number: NOTS-75201-S35

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Alvarez assesses Parsons' role in the Manhattan Project, as well as his own. He describes Parsons' missions on the Enola Gay and Parsons' promotion from Captain to Commodore to Rear Admiral. Alvarez also explains the role of the Los Alamos laboratory in atomic research and development.

Repositories: DTNSRDC, NWC, NHC

Individuals mentioned: Parsons, RADM William S. Oppenheimer, Dr. Robert Tibbets, COL Paul Lauritsen, Dr. Charles C.

Institutions: Naval Ordnance Test Station

Cities: Los Alamos, NM.

Other added entries: Manhattan Project

Amlie, Dr. Thomas S.

Interview of Dr. Thomas S. Amlie, conducted by Michelle Ballinger $% \left\{ \mathbf{n}_{1}^{2},\mathbf{n}_{2}^{3}\right\}$

Date of Interview: 760824

Documentation: Transcript, Index

Interview number: S-109

Abstract: Amlie comments on the qualities the technical director of a laboratory should have, his education, and his military service. He reflects on his career at NWC, first working on the Sidewinder missile and then as technical director. Amlie discusses problems with the Condor and Harpoon missile programs and SARAH, a radar guided version of Sidewinder. He describes his job as Technical Director, his work with the FAA, and his hobbies, including old cars and a penchant for Shakespeare.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Amlie, Dr. June

McLean, Dr. William B. Wilson, Dr. Haskell G.

Institutions: Naval Weapons Center Federal Aviation Administration

Subjects: Missile Research

Cities: China Lake, CA.

Other addey entries: Sidewinder Missile Project

Harpoon Missile Project

Condor Missile

SARAH Missile Project Technical Director Amlie, Dr. Thomas S.
Cartwright, Dr. Frank W.
Crawford, Jack A.
Donaldson, Earl J.
Schreiber, J. Raymond
Smith, Charles P.
Ward, Dr. Newton E.
Wilson, Dr. Haskell G.
Wilcox, Dr. Howard A.

Group Interview, conducted by William F. Wright and Budd Gott.

Date of Interview: 800314

Documentation: Index, Transcript 101 pp.

Interview number: S-112

Abstract: This is a group discussion on the occasion of the reunion of the Air Ordnance Department at NOTS. The goals of weapon design, Sidewinder from its start to its finished product, and Dr. William B. McLean as Technical Director are discussed. They describe NOTS role in the Korean War, Dr. L. T. E. Thompson's management style, and NOTS' relations with Washington. Also included are sections on the 1967 reorganization of the Navy, R&D at NOTS, Dr. Amlie as Technical Director, and changes in the NOTS-NWC management philosophy.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Amlie, Dr. Thomas S.
LaBerge, Dr. Walter
McLean, Dr. William B.
Parsons, RADM William S.
Smith, Chuck
Thompson, Dr. Louis T. E.
Wilcox, Dr. Howard A.
Wilson, Dr. Haskell G.

Institutions: Naval Ordnance Test Station Naval Weapons Center

Cities: China Lake, CA.

Other added entries: Sidewinder Missile Project Korean War Technical Director Anderson, Evan

Interview of Mr. Evan Anderson, conducted by Dr. Vincent Ponko, Jr.

Date of Interview: 801104

Documentation: 2 Tapes, Index, Transcript 29 pp.

Interview number: DNL-T29

Abstract: Mr. Anderson describes his work with the government before 1962 at the Franklin Arsenal, Diamond Ordnance Fuze Laboratory, and the Special Assistant to the Chief of Ordnance. He recalls his selection as a staff member in the Office of the Secretary of Defense and his work in the Base Utilization Division. Anderson talks about his transfer to the office of Director of Defense Research and Engineering (DDR&E) in 1966 and his relationships with Dr. Chalmers Sherwin and Dr. Edward Glass. He discusses studies and reports done at DDR&E, his associations with DNL/DLP and ASN (R&D), and military-civilian relationships in R&D. Anderson comments on Navy R&D efforts and opportunities in the McNamara and Laird eras, Congress' role in R&D, and his duties at the National Science Foundation.

Repositories: DTNSRDC

Individuals mentioned: Glass, Dr. Edward

Johnson, Dr. Gerald Sherwin, Dr. Chalmers

Institutions: National Science Foundation
Director of Navy Laboratories
Director of Laboratory Programs
Assistant Secretary of the Navy (R&D)
Director of Defense Research and Engineering

Franklin Arsenal

Other added entries: Sherwin Plan

Andrews, RADM B. F.

Date of Interview: 740912

Documentation: 2 Tapes

Interview number: BA-22

Repositories: NHC, DTNSRDC

Andrews, Dr. Dan

Interview of Dr. Dan Andrews, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 780300

Documentation: Transcript 18 pp.

Interview number: DNL-T8-78

Abstract: Dr. Andrews discusses his work at NOTS and NOSC during World War II and after, the differences between wartime and peacetime funding, and bureaucratic problems created by Navy reorganizations. He talks about doing contract work for industry; in particular, compartmentalization and the resulting loss in quality. He mentions profit as industry's motivating factor.

Repositories: DTNSRDC

Institutions: Naval Ocean Systems Center

Naval Ordnance Test Station

Ashworth, VADM Frederick L.

Interview of VADM Frederick L. Ashworth, conducted by Albert B. Christman

Date of Interview: 690410

Documentation: Index, Transcript 98 pp.

Interview number: NWC-75201-S61

Other interview date: 690409

Abstract: This interview was conducted partly as background for a biography of RADM William S. Parsons and partly for

inclusion in a history of Navy Research and Development. Ashworth talks about his initial contacts with Parsons, Parsons role in the Manhattan Project, and Parsons' flight to Hiroshima on the Enola Gay. He discusses Parsons' administrative talent and general disposition. Ashworth also comments on industry and the Navy and weapons R&D, the effect of officers' short tours on R&D, and the military-industrial complex. Also included are segments on NWC and Navy R&D, in general.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Blandy, ADM George Farrell, GEN
Groves, GEN Leslie
Hayward, ADM John T.
McLean, Dr. William B.
McNamara, SECDEF Robert S.
Oppenheimer, Dr. Robert
Parsons, RADM William S.
Ramsey, Dr. Norman
Rivero, ADM Horacio
Sweeney, MAJ Charles W.
Thompson, Dr. Louis T. E.
Tibbets, COL Paul

Institutions: Naval Ordnance Test Station Naval Weapons Center

Cities: Hiroshima, Japan Nagasaki, Japan Tinian Los Alamos, NM. China Lake, CA. Inyokern, CA.

Other added entries: Manhattan Project

Ashworth, VADM Frederick L.

"Nagasaki", conducted by John Burnett

Date of Interview: 560000

Documentation: Transcript 62 pp.

Interview number: S-92

Abstract: VADM Ashworth describes the preparation behind the dropping of the atom bombs on Hiroshima and Nagasaki. He comments on the Hiroshima flight; in particular, the perfect

timing of the run. Ashworth then details the Nagasaki flight - his role as weaponeer, CAPT Beahan's role as bombardier, the no drop situation at Krokura, and the flight from there to Nagasaki. In addition, Ashworth recalls the weather conditions at Nagasaki, plans to drop the bomb by radar if necessary, the fuel situation on the plane, and the emergency landing on Okinawa. Also included are comments on the roles of GEN Doolittle and GEN Groves and accuracy of the bomb drop.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Beahan, CAPT Groves, GEN Leslie
Doolittle, GEN James H.
Parsons, RADM William S.
Sweeney, MAJ Charles W.

Cities: Okinawa, Japan Nagasaki, Japan Hiroshima, Japan Krokura, Japan Los Alamos, NM. Potsdam, East Germany

Other added entries: Manhattan Project

Enola Gay

Bainbridge, Dr. Kenneth Tompkins

Interview of Dr. Kenneth Tompkins Bainbridge

Date of Interview: 600000

Documentation: Transcript 150 pp.

Abstract: Dr. Bainbridge talks of his education and early research at MIT, the creation of the NDRC Radiation Laboratory at MIT in 1940, the 1941 technical mission to England on radar development, and testing the first atom bomb.

Repositories: COL

Individuals mentioned: Szilard, Dr. Leo

Compton, Karl

Oppenheimer, Dr. Robert

Smyth, Henry D.

 $\textbf{Institutions:} \ \ \textbf{National Defense Research Committee}$

Radiation Laboratory

Massachusetts Institute of Technology

Cities: Los Alamos, NM.

Other added entries: Manhattan Project

Radar Research

Baker, Walter L.

Interview of Walter L. Baker, conducted by Richard D. Glasow

Date of Interview: 800818

Documentation: 2 Tapes, Transcript

Abstract: Mr. Baker discusses his career at the Applied Research Laboratory of Pennsylvania State University.

Repositories: ARL

Institutions: Applied Research Laboratory

Ordnance Research Laboratory Pennsylvania State University

Other added entries: Acoustics Research

Ballentine, ADM John Jennings

Interview of ADM John Jennings Ballentine

Date of Interview: 640000

Documentation: Transcript 758 pp.

Abstract: Of interest in this interview are ADM Ballentine's experiences in testing and development, his work at the Naval Proving Ground and his involvement in the development of the Norden bombsight.

Repositories: COL, NHC

Individuals mentioned: King, FADM Ernest

Institutions: Naval Proving Ground

Cities: Dahlgren, VA. Pensacola, FL.

Other added entries: Norden Bombsight

Testing and Development

Naval Aviation

Barnaby, CAPT Ralph

Interview of CAPT Ralph Barnaby, conducted by Albert B. Christman

Date of Interview: 780400

Documentation: Tape, Transcript 32 pp.

Interview number: DNL-T19-78

Abstract: CAPT Barnaby talks about his background in aviation, his early days in the Navy, and his duties during World War I. He discusses inter-war Naval aviation research and the design and evaluation of aircraft. Barnaby describes aviation work during World War II and his tenure as CO of NADC.

Repositories: DTNSRDC

Institutions: Boeing Airplane Company Naval Aviation Development Center

Other added entries: Commanding Officer

Baum, Dr. William A.

Interview of Dr. William A. Baum, conducted Dr. David H. DeVorkin

Date of Interview: 820112

Documentation: Tapes, 1.5 hours, Transcript 26 pp.

Abstract: Dr. Baum discusses his family background and training, World War II involvement with the Caltech rocket project, and his career at the Naval Research Laboratory. At NRL he first worked in fire control, then on constructing the ultra-violet solar spectrograph for V-2 rocket flights. He describes technical difficulties with the solar spectrograph, his contact with von Braun and other German rocket scientists, V-2 firings at White Sands in 1946, coworkers, his doctoral thesis, and accepting a position at Mount Wilson observatory.

Repositories: NASM

Tousey, Dr. Richard Braun, Wernher von Strong, John Wood, R. W. Lyman, Theodore

Institutions: Naval Research Laboratory California Institute of Technology

Subjects: Astrophysics

Cities: White Sands, NM.

Other added entries: V-2 Rocket

Ultra-Violet Solar Spectrograph

Fire Control

Bastedo, George

Interview of George Bastedo, conducted by Mickey Strang

Date of Interview: 750416

Documentation: Index, Transcript 13 pp.

Interview number: S-98

Abstract: Mr. Bastedo discusses his work on various missile projects, including Bat, Dove, Petrel, Terrier, and Sidewinder. He describes his work at the Bureau of Standards, the establishment of the Naval Ordnance Laboratory at Corona, CA, and his transfer to the Naval Weapons Center.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Sams, Gerald R.

Institutions: Naval Weapons Center Bureau of Standards Bureau of Ordnance

Bureau of Aeronautics

Other added entries: Bat Missile

Dove Missile Project

Sidewinder Missile Project

Petrel Missile Terrier Missile Beach, Dr. Eugene H.

Interview of Dr. Eugene H. Beach, conducted by Albert B. Christman

Date of Interview: 780321

Documentation: Transcript 17 pp.

Interview number: DNL-T12-78

Abstract: Dr. Beach comments on NOL's move to the Navy Yard in 1941; in particular, on the leadership of Dr. Duncan and Dr. McLean, on wartime research and development, and on the commitment of the scientists involved. He talks about the turnover in personnel after the war and the reduction in workload in peacetime. Beach discusses the mission of NSWC and the effort to further define it. He also mentions duplication in the labs. and describes the consolidation of NOL and NWL into NSWC in 1974 and subsequent reorganizations. He explains the role of commanding officers in recent times.

Repositories: DTNSRDC

Individuals mentioned: Bennett, Dr. Ralph
Hartmann, Dr. Gregory
McLean, Dr. William B.
Duncan, Dr.

Institutions: Naval Ordnance Laboratory Naval Weapons Laboratory Naval Surface Weapons Center Washington Navy Yard

Cities: White Oak, MD. Dahlgren, VA.

Beach, CAPT Edward Latimer

Interview of CAPT Edward Latimer Beach

Date of Interview: 670000

Documentation: Transcript 470 pp.

Abstract: CAPT Beach recalls his World War II submarine service, and the development of atomic submarines.

Repositories: COL, NHC

Individuals mentioned: Rickover, ADM Hyman

Other added entries: Atomic Submarines

Beckmann, CAPT Alcorn G.

Interview of CAPT Alcorn G. Beckmann, conducted by Albert B. Christman

Date of Interview: 680500

Documentation: Index, Transcribed 38 pp.

Interview number: NWC-75201-S53

Abstract: CAPT Beckmann discusses his time at NOTS from June 1946 to June 1947, including comments on the CO, CAPT James Sykes, the effectiveness of the laboratory workforce, and technical/scientific staff. He also describes his pre-NOTS career.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Brode, Dr. Wallace C. Bush, Dr. Vannevar
Hussey, VADM George F.
Richmond, CDR John
Sage, Dr. Bruce
Sykes, RADM James B.
Thompson, Dr. Louis T. E.
Warner, Dr. Arthur H.

Institutions: Naval Ordnance Test Station

Cities: China Lake, CA.

Bergstralh, Thor

Interview of Thor Bergstralh, conducted by Dr. David H. DeVorkin

Date of Interview: 8300801

Documentation: Tapes, 3.5 hours, Transcript, 70 pp.

Abstract: This interview contains descriptions of Bergstralh's background and schooling, radar school at MIT and Bowdin, his recruitment by NRL after World War II, and interest in upper atmosphere research. He discusses his work on the V-2, procedures at White Sands, co-workers, the Viking and Aerobee projects, rocket impact point prediction systems, cosmic ray research, and the NRL nuclear reactor. He describes his later position at Ford Aeronautics, and Ford's involvement with lunar and planetary exploration.

Repositories: NASM

Individuals mentioned: Rosen, Milton

Alter, Dr. Dinsmore
Blifford, I. H.
Havens, Dr. Ralph J.
Tombaugh, Clyde
Krause, Dr. Ernst H.
Tousey, Dr. Richard

Institutions: Naval Research Laboratory
Massachusetts Institute of Technology
Bowdin
University of Minnesota
Ford Aeronautics

Subjects: Physics Navigation Rocketry Nuclear Reactors Telemetry

Cities: White Sands, NM.

Other added entries: Ranger Hard Lander Solar Spectrograph Lunar Research Starfish Cosmic Ray Research Aerobee Rocket Viking Rocket V-2 Rocket NAVSTAR Berman, Dr. Alan

Interview of Dr. Alan Berman, conducted by Dr. Vincent Ponko, Jr.

Date of Interview: 800922

Documentation: 2 Tapes, Index, Transcript 30 pp.

Interview number: DNL-T27

Abstract: Dr. Berman talks about his motivation for accepting the position as Director of Research, NRL, his background at Hudson Laboratories, Columbia University, and the efficiency and productivity of the Navy R&D effort. He comments on placing Navy labs under the CNM, the establishment of the DNL/DLP, and military-civilian relationships in the labs. Berman evaluates the Civil Service Commission's policies on R&D, compares NRL with other labs, and describes his personal research and his management philosophy. He talks about the possible effects of putting NRL under the DNL, why it wasn't placed there in 1966, and the impact of visiting committees, reviews, and studies on NRL. He discusses technical guidance from the higher levels, coordination with other labs, and the use of colleges and universities. Berman compares the U.S. and Soviet R&D efforts, describes the Advanced Research Projects Agency, and suggests changes in the Navy's R&D organizational approach.

Repositories: DTNSRDC

Individuals mentioned: Probus, Dr. James H. Lawson, Dr. Joel Morse, Dr. Robert W. Smith, Howard

Institutions: Advanced Research Projects Agency Chief of Naval Material Director of Navy Laboratories Director of Laboratory Programs Naval Research Laboratory Office of Naval Research



Dr. Alan A. Berman (left) former Technical Director, and Captain Edward E. Henifin, former Commanding Officer of the Naval Research Laboratory.

Berman, Dr. Alan

Interview of Dr. Alan Berman, conducted by Dr. John A. S. Pitts, and Dr. David K. Allison

Date of Interview: 821118

Other interview dates: 820603, 820610, and 820619

Documentation: 9 Tapes, 12 Sides, Transcript 140 pp.

Interview number: NRL 1

Abstract: Dr. Berman gives his perspective on Naval R&D policy making, R&D management initiatives at Hudson Laboratories and NRL, and Navy R&D requirements from 1952 to 1982. He also discusses the main thrusts of Hudson Labs' and NRL's research programs.

Repositories: DTNSRDC, NRL

Institutions: Naval Research Laboratory

Hudson Laboratories

Beshany, VADM Philip A.

Interview of VADM Philip A. Beshany, conducted by Paul Stillwell

Date of Interview: 771200

Other interview date: 790100

Documentation: Index, Transcript 504 pp, Vol. 2

Abstract: VADM Beshany discusses his command of Submarine Squadron 4 in the early 1960's during the transition from diesel to nuclear powered submarines, THRESHER, ground work involved in setting up bases for Polaris submarines in Rota, Spain. Director of Submarine Warfare during the development phases of the the LOS ANGELES class attack submarine, first Deputy Chief of Naval Operations (Submarine Warfare).

Repositories: USNI, USNA, NWCM, NHC

Individuals mentioned: Zumwalt, ADM Elmo

Rickover, ADM Hyman

Institutions: Deputy Chief of Naval Operations (Submarine Warfare)

Subjects: Nuclear Propulsion

Nuclear Submarines

Other added entries: USS THRESHER USS LOS ANGELES Polaris Submarines

Birch, Dr. A. Francis

Interview of Dr. A. Francis Birch, conducted by Albert B. Christman

Date of Interview: 710217

Documentation: Inde; , Transcript 31 pp.

Interview number: NOTS-75201-S79

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Birch describes his association with Parsons as Head of Group 01 in the Manhattan Project, an Ordnance liaison. He discusses Parsons' role as administrator and gunnery expert. Birch talks about the tests at Muroc and Tinian and the Hiroshima flight. He comments on his contacts with Parsons after the war.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bainbridge, Dr. Kenneth Parsons, RADM William S.

Cities: Los Alamos, NM. Tinian Hiroshima, Japan Muroc, CA.

Other added entries: Manhattan Project

Black, CAPT Robert G.

Interview of CAPT Robert G. Black, conducted by Roger Kempler

Date of Interview: 820621

Documentation: Index, Transcript 24 pp.

Interview number: NPRDC-4

Abstract: CAPT Black talks about his initial exposure to Naval research, his assignment as Director of the Personnel Research Division of BUPERS, and the organization of Navy personnel research. He examines the research emphasis at NPRDC, Navy attitudes toward personnel research, and CAPT Black's philosophy on the subject. Black describes his major contributions to the Navy Personnel Research Program, changing the physical location of Pers-A3, and officer-civilian reslationships in BUPERS.

Repositories: DTNSRDC, NPRDC

Individuals mentioned: Sjoholm, Dr. Allan A.

Price, D. George

Institutions: Bureau of Naval Personnel
Personnel Research Division
Naval Research Advisory Committee
Navy Personnel Research and Development Center

Other added entries: Personnel Research

Blood, Dr. Howard

Interview of Dr. Howard Blood, conducted by Albert B. Christman

Date of Interview: 780310

Documentation: Transcript 16 pp.

Interview number: DNL-T2-78

Abstract: Dr. Blood talks about the merger which created the Naval Ocean Systems Center and the management problems involved. He discusses the purpose of NOSC and evaluates the products produced.

Repositories: NHC, DTNSRDC

Institutions: Naval Ocean Systems Center

Naval Undersea Center

Other added entries: Laboratory Consolidations

Bodenburg, John

Interview of John Bodenburg, conducted by Elizabeth Babcock

Date of Interview: 801230

Documentation: Index, Transcript 67 pp.

Interview number: S-115

Abstract: Mr. Bodenburg describes his background, his early work at NWC, and discusses the danger of bureaucratization at a Navy lab. He comments on NWC top management's concern for communication, morale, and productivity and the relationship between the CO and the Technical Director. Bodenburg notes a decline in the amount of innovative research and talks about the advantages of having a Rear Admiral as commander of NWC. He also states that the research end of RDT&E is a low cost, high yield field. Bodenburg explains the changing nature of Naval warfare and the political nature of weapons development. He comments on problems with the new SES system in high management, NWC's relations with Washington, and the spirit of cooperation among the labs.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Freeman, ADM Rowland G. Harris, ADM William L. Hillyer, Robert White, ADM Alfred J., Jr.

Institutions: Naval Weapons Center

Other added entries: Senior Executive Service Laboratory Management Weapons Development Bolt, Dr. Richard Henry

Interview of Dr. Richard Henry Bolt, conducted by Richard D. Glasow

Date of Interview: 800821

Documentation: Tapes, Transcript

Abstract: Dr. Bolt describes his background and education, his work with the OSRD and his research in acoustics.

Repositories: ARL

Individuals mentioned: Knudson, Dr. Vern

Meyer, Irwin

Institutions: Office of Scientific Research and Development

National Defense Research Committee

University of California

Cities: Berkeley, CA.

Other added entries: Acoustics Research

Bowen, Dr. Edward G.

Interview of Dr. Edward G. Bowen, conducted by Dr. David K. Allison

Date of Interview: 790316

Documentation: 4 Tapes (7 Sides), Index, 7 pp.

Interview number: NRL 2

Abstract: Dr. Bowen discusses radar development in England in the 1930's, radar as a source of cooperation and conflict between the United States and England, the development of radar, and radar technology during World War II.

Repositories: NRL

Subjects: Radar Research

Other added entries: Tizard Mission

Bowen, VADM Harold G.

Interview of VADM Harold G. Bowen, conducted by Dr. Peter Burton and CAPT Robert L. Hansen

Date of Interview: 740000

Documentation: Index, Transcript 45 pp.

Interview number: BA-8

Abstract: VADM Bowen talks about the Navy planning system for R&D from 1945 through 1958, the DCNO (Dev)'s responsibilities, and the Development Characteristics instituted in 1953. In the post-1958 era, Bowen discusses the DCNO (Dev)'s evaluation of the TDP, OPNAV's size and consequent inefficiency, and ASN (R&D)'s responsibility for RDT&E appropriations. He describes DDR&E interference in some programs, the DCNO (Dev)'s relationship with Congressional Armed Services Committees, and the Navy's exclusion from the space program. Bowen notes that creation of the DNL was seen as an additional act of centralization and that labs want more independent R&D authority. He also talks about the difficulty of recruiting good personnel because of competition from industry.

Repositories: NHC, DTNSRDC

Individuals mentioned: Frosch, Dr. Robert A.
Martell, VADM Charles B.
McNamara, SECDEF Robert S.

Institutions: Deputy Chief of Naval Operations (Development)
Assistant Secretary of the Navy (R&D)
Director of Navy Laboratories
Secretary of Defense
Director of Defense Research and Engineering

Subjects: Research, Development, Test, and Evaluation

Bowen, Harold G., Jr.

Interview of Harold G. Bowen, Jr., conducted by Dr. David K. Allison ${\sf D}$

Date of Interview: 790423

Documentation: 1 Tape (2 Sides), Index on four 5 x 8 cards.

Interview number: NRL 3

Abstract: This interview concerns the career and activities of VADM Harold G. Bowen, Sr.

Repositories: NRL

Individuals mentioned: Bowen, VADM Harold G.

Bowen, Dr. Ira S.

Interview of Dr. Ira S. Bowen, conducted by Albert B. Christman

Date of Interview: 701005

Documentation: Index. Transcript 33 pp.

Interview number: NWC~75201-S72

Abstract: Dr. Bowen describes his involvement in the rocket program at CalTech, the choice of China Lake, CA., for NOTS, and the first tests at NOTS. He talks about Dr. Charles C. Lauritsen, Dr. Emory Ellis, and Dr. Robert A. Millikan, and comments on his own involvement in the war effort. Bowen details his military contacts at China Lake and recalls the accidents at Eaton Canyon and Kellogg. He also mentions the tests at Goldstone Lake.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Ellis, Dr. Emory L.
Fowler, Dr. William
Lauritsen, Dr. Charles C.
Millikan, Dr. Robert A.

Institutions: Naval Ordnance Test Station

Cities: China Lake, CA. Goldstone Lake, CA. Eaton Canyon, CA. Bowyer, Dr. C. Stewart

Interview of Dr. C. Stewart Bowyer, conducted by Richard F. Hirsch

Date of Interview: 780728

Documentation: 2 Tapes (4 Sides), Typed notes, 11 pp.

Interview number: NRL 22

Abstract: Dr. Bowyer, an NRL space scientist was interviewed by Richard Hirsh as part of his research for his doctoral dissertation on the beginnings of x-ray astronomy. These tapes were prepared in conjunction with the National Air and Space Museum (NASM) and the American Institute of Physics (AIP).

Repositories: NRL, NASM

Institutions: Naval Research Laboratory
National Aeronautics and Space Administration
Lawrence Livermore Laboratory
Lockheed Corporation
National Air and Space Museum
American Institute of Physics

Subjects: Astronomy X-Ray Astronomy

Other added entries: Neutron Stars

Black Holes

Bradbury, Dr. Norris E.

Notes on Unrecorded Interview of Dr. Norris E. Bradbury, conducted by Albert B. Christman

Date of Interview: 670123

Documentation: Index, not taped 9 pp.

Interview number: NOTS-75201-S23

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Bradbury recalls that at NPG-Dahlgren, Parsons stimulated people in their work and was able to work well with people of various backgrounds. At the Manhattan Project-Los Alamos, Parso is contributed "common sense" and was probably second on command. He and Oppenheimer were natural compliments.

Bradbury also comments on Parsons after the war and, in a general way, on NOTS and the Salt Wells Pilot Plant.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Oppenheimer, Dr. Robert

Institutions: Naval Proving Ground

Cities: Los Alamos, NM. Dahlgren, VA.

Other added entries: Manhattan Project

Salt Wells Pilot Plant

Bramble, Dr. Charles C.

"Dahlgren's First Director of Research: Dr. Charles C. Bramble", conducted by Cynthia Rouse

Date of Interview: 770131

Documentation: Transcript 6 pp.

Note: This interview is Chapter VI of Dahlgren, edited by Kenneth G. McCollum.

Abstract: Dr. Bramble relates his first experiences at Dahlgren, in 1924 when as an instructor at the Naval Postgraduate School he would travel to Dahlgren to observe ordnance testing, his work at Dahlgren in World War II, Dr. L. T. E. Thompson, Nils Riffolt, the Aiken Relay Calculator, NORC, and the MARK I through MARK III calculators.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Thompson, Dr. Louis T. E.

Riffolt, Nils

Institutions: Naval Postgraduate School

Naval Proving Ground

Subjects: Computers Fire Control Computers

Ordnance

Cities: Dahlgren, VA.

Other added entries: Aiken Relay Calculator Naval Ordnance Research Calculator

Braun, RADM Boynton L.

"Early Work in Aviation: RADM Boynton L. Braun", conducted by Jack Brooks, Jr.

Date of Interview: 750509

Documentation: Transcript 23 pp.

Note: This interview is Chapter III in $\underline{\text{Dahlgren}}$, edited by Kenneth G. McCollum

Abstract: RADM Braun describes his education and his early experiences in bombing and fire control, aerial bombing, the Norden bombsight, Dahlgren in the 1920s and 1930s, and testing procedures.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Thompson, Dr. Louis T. E. King, FADM Ernest
Leary, VADM Herbert F.
Schuyler, RADM Garret Lansing
Furlong, RADM William Rea

Institutions: Naval Proving Ground

Subjects: Naval Aviation

Ordnance

Cities: Dahlgren, VA.

Other added entries: Norden Bombsight

Aerial Bombing

Breslow, Arthur

Interview of Arthur Breslow, conducted by Albert B. Christman $\,$

Date of Interview: 661000

Documentation: Index, Transcript 68 pp.

Interview number: NOTS-75201-S17

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Mr. Breslow describes the B-29 tests at Muroc, including

problems with the types of bombs to be loaded and training the crews. He also describes his work on the Manhattan Project; in particular, the day-to-day operations of the base at Los Alamos and the atom bomb test Trinity.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Kistiakowsky, Dr. George B.
Parsons, RADM William S.
Ramsey, Dr. Norman
Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Cities: Muroc, CA. Los Alamos, NM.

Other added entries: Manhattan Project B-29 Bomber Fat Man Bomb Thin Man Bomb Trinity Test

Brode, Dr. Wallace C.

Interview of Dr. Wallace C. Brode, conducted by Albert B. Christman

Date of Interview: 690500

Documentation: Index, Transcript 35 pp.

Interview number: NWC-75201-S66

Abstract: Dr. Brode discusses military-civilian relationships at Navy labs, how he came to NOTS, and his job there. He comments on discrimination problems between officers and civilians, the need for scientists to have a voice in the Navy, and the lack of contact with other scientists outside the labs. Brode also details Forrestal's visit to NOTS, his philosophy toward operating a lab, and the operation of NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bush, Dr. Vannevar Forrestal, SECNAV James Hussey, VADM George F. Sykes, RADM James B. Thompson, Dr. Louis T. E. Institutions: Naval Ordnance Test Station

Cities: Inyokern, CA.

Brooks, Dr. Harvey

Interview of Dr. Harvey Brooks, conducted by Richard D. Glasow

Date of Interview: 800820

Documentation: Tapes, Transcript

Abstract: Dr. Brooks describes his background and education, and his work with the Harvard Underwater Sound Laboratory.

Repositories: ARL

Individuals mentioned: Hunt, Prof. Ted

Hickman, Roger

Institutions: National Defense Research Committee

Harvard University

Underwater Sound Laboratory

Cities: Cambridge, MA.

Subjects: Sonar

Solid State Physics

Other added entries: Acoustics Research

Ordnance Research

Bryan, Dr. Glenn L.

Interview of Dr. Glenn L. Bryan, conducted by Roger Kempler

Date of Interview: 820729

Documentation: Transcript, 26 pp.

Abstract: Dr. Bryan discusses the background of Navy personnel research, personnel research in the 1960s, the relationship of Navy R&D to Navy Objectives, the CO/TD organizational relationship, the Psychological Sciences Division ONR, the "Center of Excellence" as a concept, the NRAC Life Sciences Committee, the establishment of NPRDC, NPRDC becoming a NAVMAT laboratory, Human Factors R&D and

NPRDC, its impact on the fleet, and achievements in its ten years of existence.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Rigney, Dr. Joseph

Dudek, Dr. Edward Fields, Dr. Victor Sjoholm, Dr. Allan A. Collins, Dr. John J. Wallace, Dr. Raines Price, D. George

Institutions: Navy Personnel Research and Development Center

Naval Research Advisory Committee

Office of Naval Research

Other added entries: Personnel Research

Center of Excellence

Burke, ADM Arleigh A.

Interview of ADM Arleigh A. Burke

Date of Interview: 720900

Documentation: Transcript 36 pp.

Abstract: ADM Burke served as Chief of Naval Operations during the development of the Polaris weapons system. This is one part of a series of seven interviews on concept and development of Polaris program conducted by the U.S. Naval Institute.

Repositories: NHC, NWCM, USNA, USNI

Institutions: Chief of Naval Operations

Subjects: Submarine Launched Ballistic Missiles
Ballistic Missile Submarines
Nuclear Powered Fleet Ballistic Missile Submarines
Fleet Ballistic Missiles
Nuclear Missiles

Nuclear Missiles Weapons Systems

Other added entries: Polaris Program

Burns, Dr. Robert O.

Interview of Dr. Robert O. Burns

Date of Interview: 741111

Documentation: 2 Tapes

Interview number: BA-21

Repositories: DTNSRDC

Burroughs, Kay (Mrs. Sherman E.)

Interview of Mrs. Kay Burroughs, conducted by John D. Gerrard-Gough

Date of Interview: 721101

Documentation: Index, Transcript 19 pp.

Interview number: NWC-75103-S83

Abstract: Mrs. Burroughs explains how she met her husband, the future ADM Burroughs, She comments on the early days of NOTS, social life there, and the men who worked around her husband. She comments on CAPT Duncan, Emory Ellis, and CDR John Richmond.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Duncan, CAPT James
Ellis, Dr. Emory L.
Richmond, CDR John
Burroughs, Kay (Mrs. Sherman E.)
Burroughs, ADM Sherman E.

Institutions: Naval Ordnance Test Station

Burroughs, Mrs. Robert (former Mrs. William S. Parsons)

Interview of Mrs. Robert Burroughs, conducted by Albert B. Christman

Date of Interview: 660421

Documentation: Index, Transcribed 154 pp.

Interview number: NOTS-75201-S10

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Mrs. Burroughs discusses Parsons' family life, personal characteristics, and decision to enter the Navy. She describes the rapport between Parsons and Dr. L. T. E. Thompson when both were at NPG and Parsons' peculiar ability (for a Navy man) to understand and communicate with scientists. Other sections cover Parsons' work with radar, the proximity fuze, and the atomic bomb, and his relationship with Dr. Robert Oppenheimer. Mrs. Burroughs also relays Parsons' opinion on postwar R&D.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Ashworth, VADM Frederick L. Fuller, Clarissa Parsons
Parsons, Mrs. William S.
Groves, GEN Leslie
Oppenheimer, Dr. Robert
Parsons, RADM William S.
Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station Naval Research Laboratory

Subjects: Radar Research Atomic Research

Cities: Los Alamos, NM. Dahlgren, VA.

Other added entries: Manhattan Project Sidewinder Missile Project Proximity Fuze Burroughs, RADM Sherman E.

Interview of RADM Sherman E. Burroughs, conducted by Albert B. Christman

Date of Interview: 660400

Documentation: Index, Transcript 22 pp.

Interview number: NOTS-75201-S2

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM Burroughs discusses the origin of NOTS, its connections with CalTech, and the choice of its location. He reminisces on his work with Dr. L. T. E. Thompson and RADM Parsons and talks about Parsons' work on the Manhattan Project and the Proximity Fuze.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Hussey, VADM George F. Lauritsen, Dr. Charles C. Parsons, RADM William S. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station
Naval Proving Ground
California Institute of Technology

Cities: Inyokern, CA. Pasadena, CA. Dahlgren, VA.

Other added entries: Proximity Fuze Manhattan Project

Burroughs, RADM Sherman E.

Interview of RADM Sherman E. Burroughs, conducted by Albert B. Christman

Date of Interview: 661104

Documentation: Index, Transcribed 51 pp.

Interview number: NOTS-75201-S20

Abstract: RADM Burroughs talks about his early career in aviation ordnance, and his time as a member of VADM Hussey's staff. Next, he discusses the idea of NOTS as a permanent



The Naval Ordnance Test Station - California Institute of Technology team. Left to right: Commander John O. Richmond, Dr. Charles C. Lauritsen, Captain Sherman E. Burroughs, Jr., Commander John T. Hayward, Dr. William A. Fowler, and Dr. Emory L. Ellis.

R&D facility. He describes the relationship between military men, engineers, and scientists at NOTS and profiles the first group of officers stationed at NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Blandy, ADM George

Byrnes, CAPT James
Duncan, CAPT James
Halsey, ADM William F.
Hayward, ADM John T.
Lauritsen, Dr. Charles C.
Moses, William
Richmond, CDR John
Schoeffel, RADM Malcom F.

Institutions: Naval Ordnance Test Station

Cities: Inyokern, CA. China Lake, CA.

Other added entries: Naval Aviation

Aviation Ordnance

Byrum, E. T.

Interview of E. T. Byrum, conducted by Richard Hirsh

Date of Interview: 760000

Documentation: Tapes

Repositories: AIP

Camp, Victor W.

Interview of Victor W. Camp, conducted by Roger Kempler

Date of Interview: 820707

Documentation: Index, Transcript 23 pp.

Interview number: NP-3

Abstract: Mr. Camp discusses the Navy's attitude toward personnel research in the 1940's and 1950's, his association with ADM Rickover's staff, and the Personnel Research Division under the Assistant Chief for Personnel -- Plans and Programs. He talks about R&D budgeting under Pers-A3,

relations between field activities and agencies in Washington, and the effect of personnel research on systems design. Camp describes the role of John J. Collins in the establishment of NPRDC, his own role in planning NPRDC, and his place in the NPRDC organization. He comments on the change in management from BUPERS to the CNM and the improved quality of Navy Personnel Research.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Price, D. George Ramses, Dr. Eugene Collins, Dr. John J.

Institutions: Navy Personnel Research and Development Center Bureau of Naval Personnel
Chief of Naval Material

Cities: San Diego, CA.

Other added entries: Technical Director Personnel Research

Carome, Dr. Edward F.

Interview of Dr. Edward F. Carome, conducted by Dr. David K. Allison

Date of Interview: 800805

Documentation: 2 Tapes, 3 sides, Index, 1 p.

Abstract: NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program. Dr. Carome discusses early experiments at NRL's Schligen laboratory, coworkers, and initial patents for a optical fiber hydrophone.

Repositories: NRL

Institutions: Naval Research Laboratory
Schlieren Laboratory
John Carroll University
Stanford University
Thompson Ramo-Wooldridge Corporation

Individuals mentioned: Davis, Dr. Charles M. Berman, Dr. Alan

Subjects: Fiber Optics

Other added entries: Fiber Optics Sensor System Acoustics Research

Fiber Optic Hydrophone

Hydrophones

Carstater, Dr. Eugene D.

Interview of Dr. Eugene D. Carstater, conducted by Roger Kempler $\,$

Date of Interview: 820723

Documentation: Transcript 19 pp.

Interview number: NP-7

Abstract: Dr. Carstater discusses his entry into Navy personnel research, and the leadership of the Navy personnel research program. He talks about the organization of Pers-15, its major accomplishments, and the military staffing within Pers-15. Dr. Carstater discusses the expansion of Navy personnel research programs in Washington and San Diego in the 1960's.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Price, D. George

Brundage, Dr. Everett G.

Institutions: Navy Personnel Research and Development Center

Bureau of Naval Personnel Personnel Research Division

Other added entries: Personnel Research

Christman, Albert B.

Interview of Albert B. Christman, conducted by Robert J. Taormina

Date of Interview: 800108

Documentation: 2 Tapes, Transcript 59 pp.

Interview number: DNL-T-22

Abstract: Mr. Christman discusses pre-World War I R&D --

including the need for R&D work in the Navy, new developments in the Fleet, and means of attracting civilians to Navy research work, and obsolescence of weapons. He also comments on R&D during the two World Wars, particularly scientists' understanding of Fleet needs and the difficulty of getting new technologies introduced into the Fleet. Christman talks about the difficulties involved in R. planning in the nuclear age, increasing bureaucracy in Navy R&D, and the reorganization of Navy R&D in the mid-1960's.

Repositories: DTNSRDC

Institutions: Systems Commands

Other added entries: Navy Research and Development

Bureau System

Chubb, Dr. Talbot A.

Interview of Dr. Talbot A. Chubb, conducted by Richard F. Hirsh

Date of Interview: 760000

Documentation: Tapes

Repositories: AIP

Institutions: Naval Research Laboratory

Subjects: Astronomy

Chubb, Dr. Talbot A.

Interview of Dr. Talbot A. Chubb, conducted by Richard F. Hirsh

Date of Interview: 780000

Documentation: 2 Tapes (4 Sides), Notes, 17 pp.

Abstract: Dr. Chubb, an NRL space scientist was interviewed by Richard F. Hirsh as part of his research for his doctoral dissertation on the beginnings of x-ray astronomy. These tapes were produced in conjunction with the National Air and Space Museum (NASM) and the American Institute of Physics (AIP).

Repositories: NRL, NASM



 $\mbox{\rm Dr. Talbot A. Chubb (left)}$ and $\mbox{\rm Dr. Herbert Friedman}$ shock testing a Deacon rocket payload.

Institutions: Naval Research Laboratory National Air and Space Museum

American Institute of Physics

Individuals mentioned: Bowyer, D. . C. Stewart

Subjects: X-Ray Astronomy

Nebulae

Other added entries: Aerobee Rocket

Neutron Stars Nike-Dan Rockets ASP Munition

Cleeton, Dr. Claud E.

Interview of Dr. Claud E. Cleeton, conducted by Dr. David K. Allison $\,$

Date of Interview: 790122

Documentation: 2 Tapes (4 Sides), list of questions on two 5

x 7 cards

Interview number: NRL-4

Abstract: Dr. Cleeton gives his perspective on Naval electronics research and applications from 1936-1972. Cleeton conducted pioneering research in microwave communications and digital electronic circuits, and directed NRL programs in radar identification, advanced radar development and applications, particularly in relation to the Space Surveillance System.

Repositories: NRL

Institutions: Naval Research Laboratory

Subjects: Radar

Space Surveillance System

Digital Systems

Electronic Equipment
Microwave Communications

Collins, Dr. John J.

Interview of Dr. John J. Collins, conducted by Roger Kempler

Date of Interview: 820727

Documentation: Index, Transcript 43 pp.

Interview number: NP-6

Abstract: Dr. Collins discusses key people in the Personnel Research Division of BUPERS, the Personnel Research Field Activity, and the attitude of BUPERS toward personnel research. He talks about supervision of PRFA, differences between the San Diego and Washington branches of PRFA, and criticism of the existence of two personnel research units. Collins talks about new developments in human factors engineering, growth in personnel research in the 1960's, the opposition to the formation of NPRDC. He describes his role in NPRDC's formation, the work of others in its formation, and his relationship with the Office of Naval Research. Collins explains the major problems that NPRDC faced at its inception, NPRDC as a CNM managed lab, and his views on the possible merger of NPRDC with another lab.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Price, D. George

Frosch, Dr. Robert A. Regan, Dr. James J.

Institutions: Navy Personnel Research and Development Center Personnel Research Field Activity Personnel Research Division Bureau of Naval Personnel Chief of Naval Material Office of Naval Research

Cities: San Diego, CA. Washington, DC.

Other added entries: Personnel Research

Human Factors Engineering



Dr. John J. Collins of the Navy Personnel Research and Development Center.

Colvard, Dr. James E.

Interview of Dr. James E. Colvard, conducted by Dr. Vincent Ponko, Jr.

Date of Interview: 801103

Documentation: 2 Tapes, Index, Transcript 40 pp.

Interview number: DNL-T28

Abstract: Dr. Colvard describes his first work assignments at NOTS in the 1950's, his time at the Applied Physics Laboratory, Johns Hopkins, working on satellite trackers for nuclear subs, and his return to NOTS in 1962. He talks about NOTS' relations with Washington, his association with Exploratory Development projects at China Lake, and the adverse effects on fire control systems of taking the lab out of the Naval Ordnance Systems Command. Colvard comments on CNM command of the labs, the establishment of the Office of the Director of Navy Laboratories, his promotion to division head at China Lake, and McLean at NOTS' Technical Director. He describes his transfer to the Naval Weapons Center at Dahlgren, VA., in 1969, his promotion to Technical Director, and the combination of NWC and NOL-White Oak into one center, the Naval Surface Weapons Center. He explains the NSWC organization and comments on the problems he had at NSWC. He talks generally about the Navy in-house laboratory system as a whole, civilian-military relationships in the Navy, and the current Navy R&D situation.

Repositories: DTNSRDC

Individuals mentioned: Amlie, Dr. Thomas S. Gralla, VADM Arthur R. McLean, Dr. William B. Smith, Bernard

Institutions: Applied Physics Laboratory Naval Ordnance Test Station Director of Navy Laboratories Naval Surface Weapons Center Naval Weapons Center

Cities: China Lake, CA. Dahlgren, VA. White Oak, MD.

Other added entries: Technical Director Laboratory Consolidations

Connolly, VADM Thomas

"25 Years of Value"

Date of Interview: 681108

Documentation: Index, transcript 16 pp.

Interview number: S57

Abstract: VADM Connolly makes a testimonial speech to the employees, former employees, and friends of the Naval Weapons Center.

Repositories: NWC, DTNSRDC, NHC

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Cooper, Dr. Eugene P.

Interview of Dr. Eugene P. Cooper, conducted by J. D. Gerrard-Gough

Date of Interview: 751024

Documentation: Index, Transcript 18 pp.

Interview number: 5313 S-101

Abstract: Dr. Cooper remembers the controversy over the location of NOTS and discusses his background in theoretical and nuclear physics. He describes fire control problems with aircraft and tells why he left NOTS. Cooper comments on his time at the University of Oregon and his return to NOTS-Pasadena. He expostulates on underwater ordnance research, his time as Associate Head of the Underwater Ordnance Department, and his feelings about NOTS at China Lake and at Pasadena.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B. Saylor, William

Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Cities: China Lake, CA. Pasadena, CA.

Couperus, Pierce G.

Interview of Pierce G. Couperus, conducted by Richard D. Glasow

Date of Interview: 800823

Documentation: Tapes, Transcript

Abstract: Mr. Couperus describes his background and education, and his work with the Harvard Underwater Sound Laboratory.

Repositories: ARL

Individuals mentioned: Smith, Fred

Institutions: Harvard University Underwater Sound Laboratory

Cities: Cambridge, MA.

Other added entries: Acoustics Research

Cozzens, Ernest G.

Interview of Ernest G. Cozzens, conducted by Leroy L. Doig, III

Date of Interview: 810625

Documentation: Index, Transcript 47 pp.

Interview number: S-126

Abstract: Mr. Cozzens explains his background, his involvement with Sidewinder, and comments on recent developments in air-to-air weaponry. He talks about relationships with contractors, quality control, and the cost and effectiveness of weapons. Cozzens discusses NWC's relationships with other labs and with the Naval hierarchy in Washington and reflects on Tom Amlie's tenure as Technical Director. He lists NOTS/NWC's contributions to the Navy.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Amlie, Dr. Thomas

McLean, Dr. William B.

Thompson, Dr. Louis T. E.

Institutions: Naval Weapons Center Naval Ordnance Test Station

Other added entries: Sidewinder Missile Project

Crary, Dr. Albert P.

Interview of Dr. Albert P. Crary

Date of Interview: 620000

Documentation: Transcript 87 pp.

Abstract: Dr. Crary talks about his work in oceanography and geophysics, involvement with the IGY, early LORAN and SOFAR, air acoustics and balloons.

Repositories: COL

Institutions: International Geophysical Year

Subjects: Oceanography Hyperbolic Navigation

Other added entries: Sound Fixing and Ranging

Long Range Navigation

Crosbie, Richard

Interview of Richard Crosbie, conducted by Tom Misa and Ed Todd

Date of Interview: 820703

Documentation: 2 Tapes, Index 4 pp.

Interview number: NADC-5,6

Abstract: Mr. Crosbie talks about the Human Centrifuge at NADC, the dynamic flight simulation of the X-15 Rocket Airplane, Boeing 707, and flight simulation training for the Project Mercury astronauts. He comments on the LBJ Space Center in Houston, Texas, and the development of the NADC in-house computer, Typhoon. Crosbie describes NADC's relations with the University of Pennsylvania, AMAL Projects, and Human Centrifuge projects, including the world's record of 31.25 G's for five seconds, set by R.



Richard Crosbie of the Naval Air Development Center.

Flanagan Gray. He discusses the Directorate Programs and the Systems $\mbox{\sc Approach}\,.$

Repositories: NADC, DTNSRDC

Individuals mentioned: Gray, R. Flanagan Poppin, CAPT Jack R. Hardy, Dr. James D.

Institutions: Naval Air Development Center Boeing Airplane Company Johnson Space Center American Medical Acceleration Laboratory University of Pennsylvania Bureau of Medicine and Surgery

Subjects: Centrifuges Aerospace Medicine Space Simulation Chambers Computers

Other added entries: Systems Approach Federal Contract Research Centers Human Centrifuge Typhoon Project

Cummins, Dr. William E.

Interview of Dr. William E. Cummins, conducted by Albert B. Christman $\$

Date of Interview: 780328

Documentation: 1 Tape

Repositories: DTNSRDC

Institutions: Naval Ship Research and Development Center

Cummins, Dr. William E.

Interview of Dr. William E. Cummins, conducted by Dr. David K. Allison

Date of Interview: 820802

Documentation: 7 Tapes, Index, Transcript 92 pp.

Abstract: Dr. Cummins relates his early training in naval architecture, working conditions at the Experimental Model Basin and the David Taylor Model Basin in the 1940's, and his views on the engineering ability and management style of CAPT Harold Saunders. He mentions the GUPPY program, submarine hull design, seaworthiness studies for several types of ships, describes testing procedures and the Polaris program in detail, reorganizations during the 1960's and relations between NAVSEA and DTNSRDC.

Repositories: DTNSRDC

Institutions: David Taylor Model Basin
David Taylor Naval Ship Research and Development Center
Experimental Model Basin
Naval Sea Systems Command
Naval Ship Research and Development Center
Society of Naval Architects
Webb Institute

Individuals mentioned: Ellsworth, William Janes, Charlie
St. Denis, Manley
Hill, Johnny
Landweber, Dr. Louis
Saunders, CAPT Harold E.
Schoenherr, Dr. Karl E.

Subjects: Cavitation
Hull Design
Hydrodynamics
Hydromechanics
Torpedos
Submarines
Seaworthiness
Waveforms
Waveform Generators

Cities: Washington, DC. Washington Navy Yard Carderock, MD.

Other added entries: FIDO Torpedo Model Basins

Model Testing Greater Underwater Propulsive Power Seakeeping Polaris Program

Custer, CAPT Benjamin Scott

Interview of CAPT Benjamin Scott Custer

Date of Interview: 650000

Documentation: Transcript, 1,022 pp.

Abstract: Of interest in this interview are CAPT Custer's recollections of his career in early Naval aviation, his flying boat squadron, command of the NORTON SOUND and involvement with the Manhattan project.

Repositories: COL, NHC

Other added entries: USS NORTON SOUND Naval Aviation Flying Boats

Manhattan Project

Davis, Dr. Charles M.

Date of Interview: 820701

Documentation: 2 Tapes, Index, 1 p., Transcript of selections from interview "FOSS: A Glance at the Past", 28 pp.

Abstract: NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program. Dr. Davis discusses early experimentation, cultivating support and trying to obtain funding from DARPA, NRL and NAVMAT, how the program was managed, co-workers, and the difficulty of recruiting qualified personnel.

Repositories: NRL

Institutions: Naval Research Laboratory
Defense Advanced Research Projects Agency
John Carroll University

Naval Material Command Office of Naval Research Thompson Ramo-Wooldridge Corporation

Individuals mentioned: Berman, Dr. Alan Bucaro, Joe
Carome, Dr. Edward F.
Donovan, Jack
Giallorenzi, Dr. Thomas G.
Henifin, CAPT Edward E.
Probus, Dr. James H.
Shajenko, Peter
Windsor, Harry

Subjects: Fiber Optics Hydrophones Hydroacoustics

Other added entries: Systems Commands Fiber Optics Sensor System Fiber Optic Hydrophone

Diehl, CAPT Walter S.

Interview of CAPT Walter Stuart Diehl

Date of Interview: 650000

Documentation: Transcript 93 pp.

Abstract: CAPT Diehl recalls his work in aerodynamics and aeronautics, designing and testing Navy airplanes, his participation in World Wars I and II, and his work at the David Taylor Model Basin.

Repositories: COL, NHC

Institutions: Experimental Model Basin

David Taylor Model Basin

Subjects: Aerodynamics

Aeronautics

Cities: Pensacola, FL.

Other added entries: Aircraft Design

Naval Aviation

DiPol, C. John

Interview of C. John DiPol, conducted by Leroy L. Doig III

Date of Interview: 810209

Documentation: Index, Transcript 23 pp.

Interview number: S-119

Abstract: Mr. DiPol comments on his arrival at NWC, the mission of the ranges, and range improvements. He mentions changes in NWC work, trends for the future, and NWC relationships with other agencies and labs. DiPol discusses the contributions of NWC, his personal philosophy on the RDT&E environment, and the people that make up China Lake and its surrounding communities.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B.

Institutions: Naval Weapons Center

Drummeter, Dr. Louis F.

Interview of Dr. Louis F. Drummeter, conducted by Dr. David K. Allison

Date of Interview: 791220

Other interview dates: 800114 and 800118

Documentation: 6 Tapes (7 Sides)

Abstract: Dr. Drummeter gives his perspective on NRL optic tests and on organization and management of NRL research programs. Drummeter played a key role in the development of NRL's programs in optical science and technology, in particular optical radiometry, quantum optics, and highenergy lasers. The interviews are supplemented by a collection of papers.

Repositories: NRL

Institutions: Naval Research Laboratory

Subjects: Optical Radar

Radiometry

High Energy Laser

Other added entries: Quantum Optics

Duncan, ADM Donald

Interview of ADM Donald Duncan

Date of Interview: 640000

Documentation: Transcript 981 pp.

Abstract: ADM Duncan reminisces about his education at the University of Michigan and the Naval Academy, his service in World War I and early Naval aviation, his experience in ordnance and communications, work in the BUAER Plans Division, his involvement in the Manhattan Project and NACA.

Repositories: COL, NHC

Institutions: National Advisory Committee on Aeronautics

Bureau of Aeronautics

Subjects: Missiles

Cities: Pensacola, FL.

Other added entries: Manhattan Project

Naval Aviation

Duncan, CAPT James

Interview of CAPT James Duncan, conducted by Albert B. Christman $% \left(\mathbf{B}\right) =\left(\mathbf{B}\right) +\left(\mathbf{B}\right$

Date of Interview: 660426

Documentation: Index, Transcript 61 pp., Appendix 7 pp.

Interview number: NOTS-75201-S9

Abstract: CAPT Duncan describes the building and equipping of NOTS in Inyokern, CA. He discusses how Prof. Michelson came to work there, Dr. Louis T. E. Thompson's influence, and CAPT Burroughs' tenure as commanding officer.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E.

Byrnes, CAPT James Hayward, ADM John T. McLean, Dr. William B. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Naval Proving Ground

Cities: Dahlgren, VA. Inyokern, CA.

Dunlap, Jack

Interview of Jack Dunlap

Date of Interview: 721000

Documentation: Transcript 32 pp.

Abstract: Mr. Dunlap was a member of the civilian steering committee for Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

Repositories: NHC, NWCM, USNA, USNI

Subjects: Submarine Launched Ballistic Missiles
Fleet Ballistic Missiles
Ballistic Missile Submarines
Nuclear Powered Fleet Ballistic Missile Submarines
Nuclear Missiles
Weapons Systems

Other added entries: Polaris Program

Ebaugh, Paul

Interview of Paul Ebaugh, conducted by Richard D. Glasow

Date of Interview: 800715

Documentation: Tapes, Transcript

Abstract: Mr. Ebaugh describes his background and education, his work with the Harvard Underwater Sound Laboratory, and the Applied Research Laboratory.

Repositories: ARL

Institutions: Harvard University
Underwater Sound Laboratory

Ordnance Research Laboratory Applied Research Laboratory Pennsylvania State University

Other added entries: Acoustics Research

Ordnance Research

Ebbert, CAPT Edwin L.

Interview of CAPT Edwin L. Ebbert, conducted by Dr. John A. S. Pitts

Date of Interview: 820622

Documentation: 2 Tapes (4 Sides), Index 4 pp.

Abstract: CAPT Ebbert discusses NRL's Commanding Officers and Technical Directors and reflects upon the problems involved when translating Navy operational needs into P&D programs.

Repositories: NRL

Institutions: Naval Research Laboratory

Ekas, RADM Claude P.

Interview of RADM Claude P. Ekas, conducted by CAPT Robert L. Hansen $% \left(1\right) =\left\{ 1\right\} =\left\{ 1\right\}$

Date of Interview: 750000

Documentation: 1 Tape, Index, Transcript 42 pp.

Interview number: BA-13

Abstract: RADM Ekas discusses the project history of the Harpoon missile, NAVAIR-NAVORD cooperation on the project, and communication between the Harpoon Program Managers and the technical workers involved. He talks about the problems of coordination between the SYSCOM commander, CNM, and CNO. He also comments on major trends in Navy R&D, including SARS, SYSCOM and CNM methods of program management, and cradle-to-grave technical continuity.

Repositories: NHC, DTNSRDC

Individuals mentioned: McNamara, SECDEF Robert S.

Institutions: Chief of Naval Operations

Bureau of Aeronautics Bureau of Ordnance

Other added entries: Harpoon Missile Project Selected Acquisition Reporting System

Ellis, Dr. Emory L.

Interview of Dr. Emory L. Ellis, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 680500

Documentation: Index, Transcript 43 pp.

Interview number: NWC-75201-S54

Abstract: Dr. Ellis describes his own background as a biochemist at CalTech, his assignment to Eaton Canyon, and his experiences at Goldstone Lake. He discusses how he came to be at NOTS, the first rocket tests there, and the camp's facilities. Ellis comments on the establishment of NOTS, the location of the lab, its military direction, and its transition to a civil service operation.

Repositories: NYC. DINSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E.

McClaren, CDR

Institutions: Naval Ordnance Test Station California Institute of Technology

Cities: Inyokern, CA. Goldstone Lake, CA. Eaton Canyon, CA.



Dr. Emory L. Ellis (left) and Haskell G. Wilson of the Naval Ordance Test Station.

Ellis, Dr. Emory L. Ellis, Marion (Mrs. Emory L.)

Interview of Dr. Emory and Marion Ellis, conducted by J. D. Gerrard-Gough

Date of Interview: 721100

Documentation: Index, Transcript 31 pp.

Interview number: NWC-75201-S84

Abstract: Dr. and Mrs. Ellis discuss the transfer of management at NOTS from CalTech to the Navy in late 1944, the problem of military-civilian relationships, and the command of CAPT Sykes. They talks about NOTS' principles of operation and the turnover in personnel. The Ellises comment on the work of Dr. Louis T. E. Thompson, facilities at NOTS, and research on submarine guns and rockets. They also describe living conditions at China Lake and the White Star Mine.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Beckmann, CAPT Alcorn G.
Armitage, LT John M.
Burroughs, ADM Sherman E.
Hayward, ADM John T.
Hussey, VADM George F.
Lauritsen, Dr. Charles C.
Sykes, RADM James B.
Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station California Institute of Technology

Cities: China Lake, CA.

Entwistle, RADM Frederick I.

Interview of RADM Frederick I. Entwistle, conducted by Albert B. Christman

Date of Int. view: 670300

Documentation: Index, Transcript 48 pp.

Interview number: NOTS-75201-S39

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM

Entwistle gives his impressions of RADM Parsons as a person and as an officer. He talks about the role of NOTS in the Navy and the role of scientists in the military. Entwistle also reflects on the contributions of Dr. Louis T. E. Thompson.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Sage, Dr. Bruce Parsons, RADM William S. Thompson, Dr. Louis T. E. Tuve, Dr. Merle

Institutions: Naval Ordnance Test Station Naval Proving Ground California Institute of Technology General Tire and Rubber Co.

Cities: Inyokern, CA. Dahlgren, VA.

Other added entries: Proximity Fuze Manhattan Project

Eyster, Dr. Eugene H.

Interview of Dr. Eugene H. Eyster, conducted by Albert B. Christman

Date of Interview: 6670100

Documentation: Index, Transcript 21 pp.

Interview number: NOTS-75201-S24

Abstract: Dr. Eyster talks about the weapons produced at Los Alamos, their specifications, and the role of NOTS, Los Alamos, and the Burlington Plant. He discusses the full-scale development and manufacture of atomic weapons. Eyster also comments on the accomplishments of the Salt Wells Pilot Plant and the reasons for its existence.

Repositories: NWC, DTNSRDC, "HC

Individuals mentioned: Longwell, Paul

Sage, Dr. Bruce

Institutions: Naval Ordnance Test Station

Salt Wells Pilot Plant

Cities: Los Alamos, NM.

Other added entries: Manhattan Project

Fallgatter, Calvin J.

Interview of Calvin J. Fallgatter, conducted by Carolyn Ogilvie

Date of Interview: 761006

Documentation: Index, Transcript 33 pp.

Interview number: 5-110

Abstract: Mr. Fallgatter comments on housing problems when NOTS opened. He talks about factors in employee turnover and discusses NOTS' first commanders.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Etheridge, CAPT Melvin R. McLaughlin, Jack

Richmond, CDR John

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Ferguson, Mary

Interview of Mary Ferguson, conducted by Susan Frutkin

Date of Interview: 740705

Documentation: 1 Tape, Index 4 pp.

Interview number: BA-24

Abstract: This interview is a taped review of a document on Navy financial management put together for Booz-Allen & Hamilton's review of Navy R&D Management 1946-1973. Mrs. Ferguson discusses the effect of the National Security Acts of 1947 and 1949 on the budget process, relationships between the Comptroller of the ONR and the DoD, how funding changes created the program planning process, who controls appropriations, and difficulties for women in the military establishment.

Repositoriés: NHC, DTNSRDC

Individuals mentioned: Livermore. Cliff

Bennett, RADM Rawson

Institutions: Office of Naval Research Comptroller of the Office of Naval Research Comptroller of the Navy

Other added entries: National Security Act Research and Development Funding Fiscal Management Franke Board Sexual Discrimination

Ferguson, Mary

Interview of Mary Ferguson

Date of Interview: 830219

Other interview date: 830305

Documentation: Tapes, Transcript, 112 pp.

Abstract: This interview is part of the "Women in the Federal Government Project", sponsored by the Arthur and Elizabeth Schlesinger Library on the History of Women in America and funded by the National Endowment for the Humanities. Ms. Ferguson describes her career, beginning as a grade 1 typist in the Department of Agriculture and retiring as a grade 17 Comptroller of the Office of Naval Research. As Comptroller of ONR, she also served as special assistant for financial management to the ASN (R&D) and as a witness in the presentation of the Navy's RDT&E budge: proposals submitted to Congress.

Repositories: RAD

Institutions: Office of Naval Research
Comptroller of the Office of Naval Research

Other added entries: Comptroller

Budget Funding Research and Development Fields, Dr. Victor

Interview of Dr. Victor Fields, conducted by Roger Kempler

Date of Interview: 820729

Documentation: Transcript, 33 pp.

Abstract: Dr. Fields relates his initial involvement with Government work, introduction to the Navy personnel research work and the special challenges associated with the military environment, the general Navy attitude toward personnel research in the 1950s and leading researchers in that era, post-war problems for the Research Division and its relationship with Bureau of Naval Personnel. He comments on applied versus basic research, the degree of supervision applied to field activities, problems associated with recruiting and utilizing research people, trends in DoD R&D, the attitude of ONR toward NPRDC, major accomplishments of NPRDC, and the "Center of Excellence" concept.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Friedman, Sidney Brundage, Dr. Everett G. Price, D. George Carstater, Dr. Eugene D. Brown, Paul Sjoholm, Dr. Allan A. Zimanski, CAPT Frank Bryan, Dr. Glenn L.

Institutions: Office of Naval Research Navy Personnel Research and Development Center Bureau of Naval Personnel

Other added entries: Personnel Research Center of Excellence

Fitzpatrick, William

Interview of of William Fitzpatrick

Date of Interview: 780000

Documentation: 1 Tape

Interview number: DNL-T14

Repositories: DTNSRDC

Foladare, Dr. Joseph

Interview of Dr. Joseph Foladare, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 700220

Documentation: Index, Transcript 22 pp.

Interview number: NWC-75201-S70

Abstract: Dr. Foladare discusses the early history of CalTech in Naval research and the key people involved in it at the start of World War II. He talks about the tests at Goldstone Lake and Eaton Canyon, the spirit of the CalTech people working in weapons research, and the budgeting and documentation of various programs at NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Fowler, Dr. William
Gardner, Trevor
Lauritsen, Dr. Charles C.
Millikan, Dr. Robert A.
Potter, Russell
Sage, Dr. Bruce
Watson, Dr. Earnest C.
Winger, Dr. Ralph

Institutions: California Institute of Technology Naval Ordnance Test Station

Cities: Inyokern, CA. Goldstone Lake, CA. Eaton Canyon, CA. Fowler, Dr. William

Interview of Dr. William Fowler, conducted by Albert B. Christman $\,$

Date of Interview: 690100

Documentation: Index, Transcript 45 pp.

Interview number: NWC-75201-S59

Abstract: Dr. Fowler discusses his work before he came to NOTS at the Naval Proving Ground and on the National Definse Research Committee. He talks about the need for rocket rocket research, the CalTech research organization, and the necessity of a West Coast research facility. Fowler describes rocket work at the Goldstone Lake Range and the start of NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bowen, Ike Burroughs, ADM Sherman E. Ellis, Dr. Emory L. Hickman, Dr. Roy Scott Lauritsen, Dr. Charles C. Lauritsen, Dr. Thomas Renard, RADM Jack C. Sage, Dr. Bruce Skinner, COL

Institutions: Naval Ordnance Test Station National Defense Research Committee California Institute of Technology Naval Proving Ground

Cities: Goldstone Lake, CA. Inyokern, CA. Dahlgren, VA. Indian Head, MD. Fresh, J. Norman

Interview of J. Norman Fresh, conducted by Dr . David K. Allison

Date of Interview: 840501

Documentation: Three Tapes (5 sides), Index

Abstract: Mr. Fresh reminisces about the history of, and his career with DTNSRDC. He describes the difficulties and political mannuvering involved in getting new wind tunnels at the Carderock laboratory; airflow tests on buildings and bridges, and designs for rigid airships in the old tunnel in the Washington Navy Yard. He talks of coworkers, famed aeronautical engineers, and work on advanced naval vehicles, DTMB's relationship with BUAER, and CAPT Harold Saunders tenure as Commanding Officer. Additional information on the Aerodynamics Laboratory may be found in Mr. Fresh's publication The Aerodynamics Laboratory (The First 50 Years), DTMB Aero Report 1070, January 1964.

Repositories: DTNSRDC

Individuals mentioned: Saunders, CAPT Harold E.

Truscutt, Starr
Zahm, Dr. Albert F.
Chaplin, Dr. Harvey R.
McCrary, John A.
de los Santos, Dr. Socrates
Saunders, CAPT Harold E.
Keil, Dr. Alfred H.
Diehl, CAPT Walter S.
Richardson, CAPT Holden C.

Institutions: Experimental Model Basin
Bureau of Aeronautics
David Taylor Model Basin
Naval Ship Research and Development Center
National Advisory Committee on Aeronautics
Naval Air Development Center
Bureau of Ships
Bureau of Construction and Repair
David Taylor Naval Ship Research and Development Center

Subjects: Aerodynamics Hydrodynamics

Cities: Carderock, MD. Langley, VA.

Other added entries: Wind Tunnels Air Cushion Vehicles



Dr. Herbert Friedman (right) and E.T. Byrum with an Aerobee rocket package.

Repositories: NASM

Individuals mentioned: Wood, R. W.
Franck, Dr. James
Kaiser, Herman F.
Braun, Wernher von
Stuhlinger, E.
Lindsay, John

Institutions: Naval Research Laboratory
Johns Hopkins University

Subjects: Satellites Optics Physics Astrophysics

Other added entries: SOLRAD Program Solar Spectroscopy Rockoon V-2 Rocket Aerobee Rocket Project Rainbarrel Rocket-Sonde

Friedman, Sidney

Interview of Sidney Friedman, conducted by Roger Kempler

Date of Interview: 8112209

Documentation: Index, Transcript 16 pp.

Abstract: Mr. Friedman discusses his contacts with NPRDC. Navy personnel research, in general, and the positions he had held in the Navy.

Repositories: DTNSRDC, NPRDC

Individuals mentioned: Brundage, Dr. Everett G.
Price, D. George
Ramses, Dr. Eugene
Collins, Dr. John J.

Institutions: Navy Personnel Research and Development Center

Other added entries: Personnel Research

Frosch, Dr. Robert A.

Interview of Dr. Robert A. Frosch, conducted by Dr. David H. DeVorkin

Date of Interview: 810710

Documentation: Tapes, 15.5 hours, Transcript, 256 pp.

Abstract: Dr. Frosch discusses his education, work and directorship of Hudson Laboratories, PERT, ocean floor modeling, the search for the THRESHER, his work at ARPA, his position as ASN, the Navy in Space and Naval R&D, SOLRAD and Navy satellites, the effect of the Mansfield Amendment and his decision to leave the Navy. Much of the interview deals with NASA, the Space Shuttle, and the Space Telescope.

Repositories: NASM

Individuals mentioned: Rabi, Isidor I.
Foley, Dr. Henry M.
Press, Frank
Nitze, SECNAV Paul

Institutions: Naval Research Laboratory
Columbia University
Hudson Laboratories
Bell Laboratories
Woods Hole Oceanographic Institute
National Aeronautics and Space Administration
Advanced Research Projects Agency
Assistant Secretary of the Navy

Subjects: Satellites Space Astronomy Seismology

Other added entries: Research and Development
Mansfield Amendment
Project Artemis
Project Media
Project Vela
Nuclear Test Detection
Program Evaluation Review Technique
JASON
Ocean Floor Modeling
USS THRESHER



Left to right: ASN (R&D) Dr. Robert A. Frosch; Dr. R.E. Gibson, Director Johns Hopkins Applied Physics Laboratory; Vice President Hubert H. Humphrey; Dr. Richard B. Kershner; SECNAV Paul R. Ignatius; RADM Levering Smith, 19 October, 1967.

Frosch, Dr. Robert A.

Interview of Dr. Robert A. Frosch, conducted by Dr. Vincent Ponko

Date of Interview: 810107

Documentation: Index, Transcript 64 pp.

Interview number: NL-T34

Abstract: Dr. Frosch compares Navy and private laboratories in terms of flexibility, mission, size, and the effect of bureaucracy. He describes ARPA's work and comments on the role of the ASN (R&D), including his personnel management philosophy, control over channels of command and R&D Budget, and philosophical observations about the Navy R&D decision-making process. Frosch evaluates the first two DNL/DLP's and talks about his influence in selecting TD's and CO's. He describes budget problems, the optimal CO-TD relationship, and McNamara and Laird's influences on Navy R&D.

Repositories: DTNSRDC

Individuals mentioned: Chaffee, John Connolly, VADM Thomas Johnson, Dr. Gerald Laird, SECDEF Melvin McNamara, SECDEF Robert S.

Institutions: Director of Navy Laboratories Director of Laboratory Programs Advanced Research Projects Agency

Other added entries: Technical Director

Fuller, Mrs. Clarissa Parsons

Interview of Mrs. Clarissa Parsons Fuller, conducted by Albert B. Christman

Date of Interview: 670100

Documentation: Index, Transcript 106 pp.

Interview number: NOTS-75201-S32

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Mrs. Fuller, RADM Parsons' sister, talks about the Parsons' move from Illinois to New Mexico, the Parsons children's early

schooling, and RADM Parsons' admission to the Naval Academy at Annapolis. She discusses her brother's role on the Manhattan Project and her contacts with him at the time. Also included are sections on the Proximity Fuze, Parsons' sea duty, and his flight to Hiroshima on the Enola Gay.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.
Burroughs, Martha Parsons
Oppenheimer, Dr. Robert
Parsons, Clarissa
Parsons, Clare
Parsons, Critchell

Institutions: U. S. Naval Academy

Cities: Annapolis, MD. Los Alamos, NM. Ft. Sumner, NM. Chicago, IL.

Other added entries: Manhattan Project

Furth, RADM Frederick R. Priori, Dr. E.

Interview of RADM Frederick R. Furth and Dr. E. Priori

Date of Interview: 740723

Documentation: 3 Tapes

Interview number: BA-17

Repositories: DTNSRDC

Gates, SECNAV Thomas S.

Interview of SECNAV Thomas S. Gates

Date of Interview: 720900

Documentation: Transcript 71 pp.

Abstract: Thomas S. Gates was Secretary of the Navy during the development of Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

Repositories: NHC, NWCM, USNA, USNI

Institutions: Secretary of the Navy

Subjects: Submarine Launched Ballistic Missiles
Fleet Ballistic Missiles
Ballistic Missile Submarines
Nuclear Powered Fleet Ballistic Missile Submarines
Nuclear Missiles
Weapons Systems

Other added entries: Polaris Program

Giallorenzi, Dr. Thomas G.

Interview of Dr. Thomas G. Giallorenzi, conducted by $\operatorname{Dr. David} K. \operatorname{Allison}$

Date of Interview: 800926

Documentation: 1 Tape, 3 5X7 cards of questions asked

Abstract: NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program.

Repositories: NRL

Institutions: Naval Research Laboratory

Subjects: Fiber Optics

Other added entries: Fiber Optics Sensor System

Acoustics Research Fiber Optic Hydrophone

Hydrophones

Gebhard, Dr. Louis A.

Interview of Dr. Louis A. Gebhard, conducted by Dr. David K. Allison

Date of Interview: 771003

Documentation: 6 Tapes (11 Tapes), Index, Bound Transcript

"An Interview with Dr. Louis Gebhard"

Other interview dates: 770912, 770919

Abstract: Dr. Gebhard discusses radio-electronic research in the Navy and at NRL from 1917-1977. Gebhard joined NRL in 1923 and his research resulted in more than 90 patents and significant advances in radar, radio communications, direction finding, and electronics.

Repositories: NRL

Institutions: Naval Research Laboratory

Subjects: Electronics

Radar

Radio Communications

Gleiter, Werner

Interview of Werner Gleiter, conducted by Tom Misa and Ed Todd

Date of Interview: 820708

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-8

Abstract: Mr. Gleiter discusses his background, his service in the Navy in World War II, and how and why he came to NADC. He describes NADC sonobuoy research, the SSQ-15 Sonobuoy, cooperation between government and industry, and technical difficulties with sonobuoys. Gleiter talks about the Columbia University Sonobuoy and ASW programs, the rise of Air ASW, and NADC's relations with BUAER. He also mentions NADC's contacts with local universities.

Repositories: NADC, DTNSRDC

Individuals mentioned: Krutter, Dr. Harry

Mason, Russell Howard, Jim Wallace, John D.

Institutions: Naval Air Development Center Underwater Sound Laboratory Standards and Calibration Laboratory Bureau of Aeronautics Columbia University

Subjects: Antisubmarine Warfare Antisubmarine Aircraft Sonobuoys

Cities: Orlando, FL. New London, CT.

Other added entries: SSQ-15 Sonobouy

Goddard, Mrs. Robert

Interview of Mrs. Robert Goddard, conducted by Albert B. Christman

Date of Interview: 710128

Documentation: Index, No transcript, Notes 6 pp.

Interview number: NWC-75201-S75

Abstract: This interview is recorded in note form and not intended for general use. Mrs. Goddard discusses Dr. Robert Goddard's disposition, his relationship with Navy officers, and the influence on him of Prof. Webster of Clark University. She comments on Goddard's rivals at CalTech and his relationship with Dr. Louis T. E. Thompson.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Webster, Dr. A. G. Karman, Dr. Theodore von

Thompson, Dr. Louis T. E.

Institutions: Naval Proving Ground

Cities: Dahlgren, VA.

Goss, Dr. Wilbur Porter, Henry

Interview of Dr. Wilbur Goss and Henry Porter, conducted by A. B. Christman

Date of Interview: 660504

Documentation: Index, Transcript 40 pp.

Interview number: NOTS-75201-S14

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Goss and Porter discuss Parsons' personal attributes, hiconfidence in people, his ability to do a top-flight jow, and his knack for working with other people. They also recall the planning, testing, and deployment in Europe and the Far East of the Proximity fuzes.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Tuve, Dr. Merle

Other added entries: Proximity Fuze

Gould, Gerald

Interview of Gerald Gould

Date of interview: 780000

Interview number: DNL T-20

Documentation: 1 Tape

Repositories: DTNSRDC

Gouldman, Harold M. Jr.

Date of Interview: 760727

Documentation: Transcript 14 pp.

Note: This interview is Chapter IX of $\underline{\text{Dahlgren}}$, edited by Kenneth G. McCollum

Abstract: Mr. Gouldman, a lifelong resident of Dahlgren, discusses community relations, education for base children, facilities, and funding.

Repositories: NSWC, DTNSRDC

Institutions: Naval Proving Ground Naval Surface Weapons Center

Gralla, VADM Arthur R.

Interview of VADM Arthur Gralla, conducted by Vincent Ponko, ${\tt Jr.}$

Date of Interview: 801104

Documentation: 2 Tapes, Index, Transcript 31 pp.

Interview number: DNL-T30

Abstract: VADM Gralla describes his pre-1946 work in R&D, including torpedo research, time in CNO, a period as CO of the USS NORTON, and work in BUORD and BUWEPS. He discusses his tenure as the first head of the Naval Ordnance Systems Command: his opposition to the formation of DNL/DLP, his evaluation of Dr. Gerald Johnson as the first DNL/DLP, and the need for military control of the labs. Gralla questions the logic of placing the laboratories under the DNL and states that they should be placed under the Systems Commands. He adds that he would limit the power of the ASN (R&D) and the CNM, make the labs compete with private industry for work, and keep the labs from doing any more than pure research. Gralla details Naval Ordnance Systems Command operations, in particular, the funding process and the problems of the material Navy administratively a technically. He mentions some key people in Navy R&D -William Raney, Dr. Joel Lawson, and SECNAV Paul Nitze.

Repositories: DTNSRDC

Individuals mentioned: Frosch, Dr. Robert A.

Johnson, Dr. Gerald Nitze, SECNAV Paul Raney, Dr. William

Institutions: Naval Ordnance Systems Command Chief of Naval Material Bureau of Ordnance Bureau of Weapons

Granum, RADM Alfred M.

Interview of RADM Alfred M. Granum, conducted by A. B. Christman $\,$

Date of Interview: 670100

Documentation: Index, Transcript 11 pp.

Interview number: NOTS-75201-S29

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM Granum describes Parsons as a young Ensign under his command on the USS IDAHO. He talks about Parsons' practicality, common sense, moral courage, and leadership ability.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.
Blandy, ADM George

Grodsky, Jim

Interview of Jim Grodsky

Date of Interview: 750122

Documentation: 1 Tape

Interview number: BA-26

Repositories: NHC

Groves, LTGEN Leslie

Interview of LTGEN Leslie Groves, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 670500

Documentation: Index, Transcript 55 pp.

Interview number: NOTS-75201-S42

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. GEN Groves discusses in detail RADM (then CAPT) Parsons' role in the Manhattan Project from Los Alamos to Alamogordo to Tinian and Hiroshima. He also recalls the dropping of the Nagasaki bomb, in particular, the role of ADM (then CAPT) F. L. Ashworth. Groves talks about military-scientific relations today and during the Manhattan Project.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Ashworth, VADM Frederick L.
Oppenheimer, Dr. Robert
Purnell, RADM William R.
Tibbets, COL Paul

Institutions: Naval Ordnance Test Station

Cities: Inyokern, CA. Los Alamos, NM. Alamogordo, NM. Tinian Nagasaki, Japan Hiroshima, Japan

Other added entries: Manhattan Project

Guthrie, Dr. Robert C.

Interview of Dr. Robert C. Guthrie, conducted by Dr. David K. Allison

Date of Interview: 780413

Documentation: 3 Tapes (6 Sides), Index 5 pp.

Abstract: Dr. Guthrie talks about the development of radar at NRL, the first major demonstration of the 28 redarded equipment in 1936, the installation of an experimental loss requirement in the USSI EAEV, the companies not Britain.

and American radar work in the 1930's, and independence from the research of the U.S. Army, the Tizard Mission, NDRC, AEW development in conjunction with the Naval Air Modification Unit, and NRL Research Management.

Repositories: NRL

Institutions: Naval Research Laboratory Radio Corporation of America National Defense Research Committee Naval Air Modification Unit U. S. Army Signal Corps

Subjects: Radar Radio Transmitters

Other added entries: Radar Research Airborne Early Warning Systems Tizard Mission USS LEARY

Habicht, Frank

Interview of Mr. Frank Habicht, conducted by Albert B. Christman ${\sf B}$

Date of Interview: 670500

Documentation: Index, Transcript 54 pp.

Interview number: NOTS-75201-S44

Abstract: Mr. Habicht describes Army rocket tests at Elgin Field in late 1942 and early 1943 and the first American use of rockets in combat. He talks about his arrival at NOTS, his position as Administrative Assistant under CAPT Burroughs, and the leadership at NOTS and in the Bureau of Ordnance. He discusses problems at NOTS, including those of construction and discipline and how NOTS received its funds.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E.
Hayward, ADM John T.
Parsons, RADM William S.
Richmond, CDR John
Vieweg, RADM Walter V. K.

Institutions: Naval Ordnance Test Station
U. S. Army
Bureau of Ordnance

Cities: Inyokern, CA.

Other added entries: Rocket Research

Haff, CAPT William B.

Interview of CAPT William B. Haff, conducted by Leroy L. Doig, III

Date of Interview: 810624

Documentation: Transcript 33 pp.

Interview number: S-125

Abstract: CAPT Haff explains the changes in the character of air-to-air combat, including new weapons and electronic warfare. He discusses the future of NWC, the place of Navy labs versus that of the contractor in R&D, and relations with contractors and people in Washington. Haff comments on military-civilian relationships at NWC and lab responses to Fleet needs. He talks about NWC's top management, his philosophy on RDT&E, and NWC as a command.

Repositories: NWC, DTNSRDC, NHC

Institutions: Naval Weapons Center

Other added entries: Electronic Warfare

Hafstad, Dr. Lawrence R.

Interview of Dr. Lawrence R. Hafstad, conducted by Albert B. Christman

Date of Interview: 710200

Documentation: Index, Transcript 21 pp.

Interview number: NWC-75201-S76

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Hafstad discusses his early contacts with Parsons at NRL, their early atomic work, and the proximity fuze. He talks about Parsons' leadership and technical ability on the proximity fuze project, the influence of Dr. Charles C. Lauritsen on Parsons, and Lewis Strauss' role as Navy Financial Advisor.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Strauss, Lewis L.

Tuve, Dr. Merle

Lauritsen, Dr. Charles C.

Institutions: Naval Research Laboratory

Subjects: Radar

Other added entries: Proximity Fuze

Hall, Dr. John L.

Interview of Dr. John L. Hall, conducted by Dr. David H. DeVorkin

Date of Interview: 790221

Documentation: Tapes, 1 1/2 hrs., Transcript 29 pp.

Abstract: Dr. Hall speaks about his family background and education, early contacts and interests in photoelectric photometry, red sensitive cell photometry, work at the Radiation Laboratory at MIT during World War II, research at the Naval Observatory, and co-discovery of interstellar polarization.

Repositories: AIP

Institutions: Naval Observatory

Massachusetts Institute of Technology

Subjects: Astronomy

Other added entries: Photoelectric Photometry

Hardy, CAPT John I.

Interview of CAPT John I. Hardy, conducted by Albert B. Christman

Date of Interview: 670213

Documentation: Index, Transcript 39 pp.

Interview number: NOTS-75291-S34

Abstract: CAPT Hardy explains how his Navy background helped

him during two tours, one as CO of NOTS. He discusses the role of NOTS as both a quick fix for the Fleet and a long-term R&D Center. Hardy talks about the community surrounding the Center and the support NOTS gets from the Navy Department in Washington.

Repositories: NWC, DTNSRDC, NHC

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Other added entries: Naval Research

Commanding Officer

Hartmann, Dr. Gregory

Interview of Dr. Gregory K. Hartmann, conducted by Mrs. Susan Frutkin and CAPT Robert L. Hansen

Date of Interview: 740000

Documentation: 6 Tapes, Index, Transcript 149 pp.

Interview number: BA-4-74

Abstract: In this extensive and broad ranging interview, Dr. Hartmann recalls a few specific experiments he was involved in, including the Bikini bomb tests. He talks about BUORD's mine and torpedo work, the establishment of NOL, and the Naval Gun Factory and magnetic mines. He talks about R&D in BUORD, particularly the mission of NOL, the Naval Proving Ground at Dahlgren, Va., and Atomic Energy Commission work at NOL. Hartmann comments on laboratory management, the distinction between the CO and TD, the Bureaus' attempts to create a lab management office, laboratory-SYSCOM dialogues, and the Research and Development Board. He discusses Dr. Chalmers Sherwin's opinions of lab project management, DDR&E's drive to improve the labs, and examples of aborted R&D projects.

Repositories: NHC, DTNSRDC

Individuals mentioned: Bennett, Dr. Ralph
Foster, Dr. John S.
Frosch, Dr. Robert A.
Johnson, Dr. Gerald
McLean, Dr. William B.

McLean, Dr. William B.
McNamara, SECDEF Robert S.
Raborn, RADM William F.
Rothman, Dr. Samuel

Sherwin, Dr. Chalmers

Institutions: Director of Defense Research and Engineering Bureau of Ordnance
Atomic Energy Commission
Naval Ordnance Laboratory
Director of Navy Laboratories
Naval Electronics Laboratory
Systems Commands

Subjects: Limpet Weapons Antivehicle Weapons Naval Mine Warfare

Other added entries: Project REFLEX SUBROC Missile Project Navy Industrial Fund Operation Crossroads

Harwit, Dr. Martin Kondracki, Henry

Interview of Dr. Martin Harwit and Henry Kondracki, conducted by Dr. David H. Devorkin

Date of Interview: 830209

Documentation: Tapes, 1.5 hours, Transcript, 67 pp.

Abstract: This double interview with Kondracki and Harwit centers on their work in the design and construction of an infrared Aerobee rocket payload, and includes discussion of other rocket groups at NRL, use of Atlas missiles, and NASA's doubts about helium-cooled payloads.

Repositories: NASM

Institutions: Naval Research Laboratory

Cornell

National Aeronautics and Space Administration

Subjects: Astronomy

Other added entries: Aerobee Rocket

Atlas Missile

I THE MENTING A PROPERTY OF THE PROPERTY OF TH

Harwit, Or. Martin

Interview of Dr. Martin Harwit, conducted by Dr. David H. DeVorkin

Date of Interview: 830419

Documentation: Tapes, 9 hours, Transcript, 170 pp.

Other dates of interviews: 830620 and 830622

Abstract: Dr. Harwit discusses his background and education, service in the Army Chemical and Signal Corps, thesis on interferometry, post-graduate education at Cambridge, work at Cornell and contact with NRL, building rocket sonde packages, debate over satellites versus balloons versus sounding rockets, relationship with NASA, infrared systems and Hadamard Transform spectroscopy.

Repositories: NASM

Individuals mentioned: Friedman, Dr. Herbert
Gold, Thomas
Bondi, Hermann

Institutions: Naval Research Laboratory
North Atlantic Treaty Organization
U. S. Army Signal Corps
Oberlin College
University of Michigan
Massachusetts Institute of Technology
U. S. Army Chemical Corps
National Aeronautics and Space Administration
Cornell
U. S. Army

Subjects: Infrared Astronomy Astronomy

Other added entries: Rockoon Atmospheric Research Rocket-Sonde Hadamard Transform Spectroscopy Hattabaugh, William R.

Interview of William R. Hattabaugh, conducted by Leroy L. Doig III and Joseph M. Burge

Date of Interview: 810709

Documentation: Index, Transcript 31 pp.

Interview number: S-127

Abstract: Mr. Hattabaugh reflects on his early association with NWC, NWC's relations with contractors, and changes in the Center's role in the Navy. He comments on the interaction of the R&D and T&E sides of the lab and relations with and support of the Fleet. Hattabaugh also notes the changes in the type of work at NNWC and talks about NWC's role in the surrounding community. He discusses Dr. William B. McLean.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B.

Hillyer, Robert

Institutions: Naval Weapons Center

Havens, Dr. Ralph J.

Interview of Dr. Ralph J. Havens, conducted by Dr. David H. DeVorkin

Date of Interview: 831006

Documentation: Tapes, 1.25 hours, Transcript, 20 pp.

Abstract: The interview with Havens covers his education, employment at NRL after World War II, meteorological research in V-2 and Rockoon experiments, the development of the Havens cycle gauge for air pressure, his contacts with NACA, and move to Ford Aeronautics.

Repositories: NASM

Institutions: Naval Research Laboratory
Ford Aeronautics
University of Michigan
National Advisory Committee on Aeronautics

Subjects: Meteorology

Rocketry

A TO SEE THE WASHINGTON OF THE FREE MAN

Astronomy

Other added entries: V-2 Rocket Atmospheric Research Viking Rocket

Hay, Marley Fotheringham

Interview of Marley Fotheringham Hay

Date of Interview: 500000

Documentation: Transcript 19 pp.

Abstract: Concerns submarine construction and submarine

warfare in World War I.

Repositories: COL, NHC

Subjects: Naval Architecture

Other added entries: Submarine Design

Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 660500

Documentation: Index, Transcript 38 pp.

Interview number: NOTS-75201-S6

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Hayward first describes the search for a new ordnance test sight. He talks about Parsons' "technical vision", and their contacts on the Manhattan Project. Hayward talks about ordnance work during and after World War II. Next is the problem of keeping scientists at NOTS after the war. Finally, he discusses Parsons the man - scientist and officer combined.

Repositories: DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E. Lauritsen, Dr. Charles C. Parsons, RADM William S.

Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station
Office of Scientific Research and Development
California Institute of Technology

Cities: China Lake, CA.

Other added entries: Manhattan Project

Research Management

Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by J. D. Gerrard-Gough

Date of Interview: 730726

Documentation: Index, Transcript, Part I 59 pp. Part II 6

pp.

Interview number: NWC-S86

Note: This includes another interview conducted on 731115

Abstract: In part one, VADM Hayward discusses the role of rocket weapons in the Pacific during World War II, the intermixing of ordnance and rocket research, and tests at Armitage Field. Hayward describes his one assignment to NOTS, aircraft armament, and facilities at NOTS. He explains his responsibilities there, his trip to Japan after the war with Dr. Charles Lauritsen, and the choice of a successor for ADM Burroughs at NOTS. He also talks about ADMs Sykes and Switzer. In part two, Hayward makes broad comments about the educational system for dependents for NOTS employees and postwar research programs at NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Brown, Dr. Ira Sprague Burroughs, ADM Sherman E.
Fowler, Dr. William
Hussey, VADM George F.
Lauritsen, Dr. Charles C.
Parsons, RADM William S.
Ramsey, RADM DeWitt
Switzer, VADM W. G.
Sykes, RADM James B.
Temple, RADM H. B.
Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Other added entries: Ordnance Research

Rocket Research

Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by CAPT Robert L. Hansen, and Dr. Peter Bruton

Date of Interview: 741009

Documentation: Index, Transcript 45 pp.

Interview number: BA-11

Abstract: VADM Hayward discusses the establishment of the Assistant Chief of Naval Operations (R&D), the ACNO's relationship with the Bureaus, budget requirement for R&D in the 1950's, and how the R&D Review Board revised programs. He comments on the Libby Board study - in particular, the proposed merger of BUORD and BUAER, how inter-bureau technical committees operated, and ACNO (R&D) responsibility. Hayward also describes ACNO's effect on Navy programs, the impact of DDR&E, DCNO's duties as appropriations officer, and SECDEF McNamara's feelings on Navy R&D.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bennett, RADM Rawson Burke, ADM Arleigh A. Franke, William B. Furth, RADM Frederick R. Libby, VADM R. E. McNamara, SECDEF Robert S.

Institutions: Assistant Secretary of Defense (R&D) Bureau of Ordnance Bureau of Aeronautics Deputy Chief of Naval Operations (Development) Director of Defense Research and Engineering Office of Naval Research

Other added entries: Libby Board Technical Development Plan

Hayward, VADM John T.

Interview of VADM John T. Hayward, conducted by Dr. Evelyn M. Cherpak

Date of Interview: 770506

Documentation: Transcript 62 pp., 1 vol.

Interview number: O.H. 24

Abstract: VADM Hayward discusses his education at the U. S. Naval Academy, his flight training, service on the USS LANGLEY, and work as the Assistant Chief Engineer at the Naval Aircraft Factory in Philadelphia, PA. He recalls being Experimental Officer at NOTS, the development of the atom bomb, and serving as the Commanding Officer of the Naval Ordnance Laboratory, 1954-1956.

Repositories: NWCM

Institutions: Naval Aircraft Factory Bureau of Ordnance Bureau of Aeronautics Naval Ordnance Laboratory Naval Ordnance Test Station

Subjects: Naval Aviation Ordnance

Cities: Inyokern, CA. Philadelphia, PA. Pensacola, FL.

Other added entries: Commanding Officer Manhattan Project

Hayward, ADM John T.

Interview of ADM John T. Hayward, conducted by Nelson Wood

Date of Interview: 780815

Documentation: Tapes, Transcript

Abstract: ADM Hayward talks about torpedo research and

development and the Mark 48 Torpedo.

Repositories: ARL

Institutions: Naval Underwater Systems Center

Cities: Newport, RI.

Subjects: Torpedos

Other added entries: Torpedo Mark 48

Torpedos

Henderson, J.

Interview of J. Henderson, conducted by Nelson Wood

Date of Interview: 770520

Documentation: Tapes, Transcript

Abstract: Mr. Henderson, a former director of the Johns Hopkins Applied Physics Laboratory, describes its

operations.

Repositories: ARL

Institutions: Johns Hopkins University

Applied Physics Laboratory

Subjects: Physics

Henifin, CAPT Edward E.

Interview of CAPT Edward E. Henifin, conducted by Dr. David K. Allison

Date of Interview: 800118

Documentation: 1 Tape, 5 pp. summary

Abstract: CAPT Henifin reflects on R&D management in the Navy and at NRL. He also talks about management changes and

what led to them.

Repositories: NRL

Institutions: Naval Research Laboratory

Research Management Laboratory Management Herget, Dr. Paul

Interview of Dr. Paul Herget, conducted by Dr. David H. DeVorkin

Date of Interview: 770419

Other date of interview: 770420

Documentation: Tapes, 6 1/2 hrs., Transcript 96 pp.

Abstract: Dr. Herget discusses his family, background, schooling, work at the Cincinnati observatory, and the Rechen Institute. He speaks about his work during World War II, his position at the Nautical Almanac Office, and research through the 1950s. [Dr. Herget's papers are in the collection of the U. S. Naval Observatory]

Repositories: AIP

Institutions: Nautical Almanac Office

Naval Observatory

Subjects: Astronomy

Other added entries: Nautical Almanac

Highberg, Dr. Ivar E.

Interview of Dr. Ivar E. Highberg, conducted by Leroy L. Doig, III

Date of Interview: 810401

Documentation: Index, Transcript 26 pp.

Interview number: S-121

Abstract: Dr. Highberg discusses his work at NOTS in the late 1940's, the dedication of the Michelson lab, and changes in the use of NOTS facilities over the years. He describes early rocket missile test work at the lab and NOTS involvement in satellite tracking. Highberg talks about the use of computer simulation, digital fuze control work on missiles and guns, and the political ramifications for NOTS of the 1966 divison of BUWEPS into NAVORDSYSCOM and NAVSHIPSYSCOM. He comments on the leadership of Dr. Louis T. E. Thompson and his personal philosophy of research and development.

Repositories: NHC, DTNSRDC, NWC

Individuals mentioned: McLean, Dr. William B. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station Naval Weapons Center Naval Ships Systems Command Naval Ordnance Systems Command Michelson Laboratory

Subjects: Computer Simulation

Other added entries: Digital Fuze Control Satellite Tracking Systems Commands

Hillyer, Robert

Interview of Mr. Robert M. Hillyer, conducted by Leroy L. Doig, III

Date of Interview: 820517

Documentation: Index, Transcript 77 pp.

Interview number: S-134

Abstract: Mr. Hillyer talks about the NOTS-Naval Ordnance Lab-Corona merger, the fuze department at NWC, and gains and losses of the 1967 lab consolidation. He comments on the role of the Technical Director at NWC, appropriate and inappropriate areas of research for the lab, and military-civilian relationships in the Navy, Hillyer discusses NWC Commanders, NWC relationships with DON in Washington, and his reasons for becoming DCNM(L). He describes his managerial philosophy, the outstanding contributions of NWC to the Navy, and the problem of declining productivity. Hillyer also expostulates on NWC's future and offers advise to NWC's new managers.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Freeman, ADM Rowland G.
Harris, ADM William L.
Lahr, CAPT John Jude
McLean, Dr. William B.

Institutions: Naval Weapons Center
Deputy Chief of Naval Material (Laboratories)
Director of Navy Laboratories

Cities: China Lake, CA.



Retirement party for Dr. Margurite M. "Peggy" Rogers. Left to right: Robert M. Hillyer, former Technical Director of the Naval Weapons Center and Director of Navy Laboratories 1982-1984, and Dr. Rogers, former Laboratory Director (Acting), and Head, Systems Development Department; March 27, 1980.

Corona, CA.

Other added entries: Technical Director Commanding Officer Laboratory Consolidations

Himes, Allen W.

Interview of Allen W. Himes, conducted by Albert B. Christman

Date of Interview: 780414

Documentation: 1 Tape, Transcript 25 pp.

Interview number: DNL-T13-78

Abstract: Mr. Himes discusses the effect of the Bell Report, Project 97, and the Sherwin Plan. He comments on the establishment of the DNL, the first DNL - Dr. Gerald Johnson, and the SYSCOMs' attitude toward the DNL. Himes talks about the consolidation of the labs, Dr. Joel Lawson as the DNL, and Navy R&D cutbacks and consolidations in the early 1970's. He describes his and Lawson's relations with Dr. Robert A. Frosch, former ASN (R&D), personnel problems in the DNL office, and his term as Deputy Assistant to the DNL.

Repositories: DTNSRDC

Individuals mentioned: Lawson, Dr. Joel Frosch, Dr. Robert A. Johnson, Dr. Gerald

Institutions: Chief of Naval Material Director of Navy Laboratories Systems Commands

Other added entries: Project 97
Bell Report
Sherwin Report
Laboratory Management
Laboratory Consolidations

with the season of the season

Himes, Allen W.

Interview of Allen W. Himes, conducted by Dr. David K. Allison

Date of Interview: 830810

Documentation: 2 Tapes, Transcript 36 pp.

Abstract: Mr. Himes discusses the consolidation of the labs into the eight NAVMAT R&D Centers, headquarters administration of the labs, linkage of the labs to the acquisition process, and the organizational evolution of the DNL from 1965-1983. He comments on the leadership styles of the six DNL's and internal organization of the office.

Repositories: DTNSRDC

Individuals mentioned: Probus, Dr. James H.
Lawson, Dr. Joel
Hillyer, Robert
Parrish, CAPT David
Whittle, ADM Alfred J., Jr.
Law, Howard
Swiggum, George
Huang, Theodore S.
Langille, CAPT John

Institutions: Deputy Chief of Naval Material (Laboratories)
Director of Navy Laboratories
Chief of Naval Material

Subjects: Laboratory Management Laboratory Consolidations Laboratory Administration

History of Radio-Radar-Sonar

"History of Radio-Radar-Sonar", papers of RADM Stanford Caldwell Hooper

Documentation: 156 Tapes, Transcripts

Abstract: This series of tape recordings is part of the papers collection of RADM Stanford Caldwell Hooper donated to the Naval Historical Foundation and deposited in the Manuscript Collection of the Library of Congress. Hooper was head of the Radio Division of the Bureau of Engineering (1918-1923). This series contains 156 consecutively numbered tapes recorded by Hooper and his associates concerning the history of naval developments in radio,

sonar, and radar. Typed transcripts exist for interviews 1-93, and there are additional notes and background materials. tapes 150 and 151 are interviews with Dr. Leo C. Young of NRL and are duplicated in the NRL oral history collection.

Individuals mentioned: Hooper, RADM Stanford C.

Young, Dr. Leo C.

Institutions: Naval Research Laboratory

Bureau of Engineering

Subjects: Radar

Sonar

Radio Communications

Radio

Hollings, Anthony J.

Interview of Anthony J. Hollings, conducted by Dr. David K. Allison

Date of Interview: 800104

Other interview date: 080108

Documentation: 5 Tapes (9 Sides), typewritten index, 8 pp.

Abstract: Mr. Hollings discusses his career in the Royal Navy, harbor defense and shock and vibration programs at NRL, the difference between American and British methods of research, and the management of the NRL search program for THRESHER. He talks about research at NRL, ONR and NIF funding, and major organizational and management changes there between 1963 and 1980. The interview is supported by a collection of papers.

Repositories: NRL

Individuals mentioned: Klein, Dr. Elias

Bagley, Jim Berman, Dr. Alan Cleeton, Dr. Claud E. Waterman, Dr. Peter Mutch, Warren Owen, RADM Thomas B. Noel, Lee Henifin, CAPT Edward E.

Sapp, Earl

Institutions: Naval Research Laboratory

Woods Hole Oceanographic Institute Office of Naval Research Royal Navy

Subjects: Oceanography

Other added entries: USS THRESHER Navy Industrial Fund Shock Vibration

Hooker, Ruth

Interview of Ruth Hooker, conducted by Dr. David K. Allison

Date of Interview: 791011

Documentation: 2 Tapes (3 Sides)

Abstract: Ms. Hooker discusses the establishment of the NRL technical library. She was originally hired as a physicist.

Repositories: NRL

Institutions: Naval Research Laboratory

Hooper, VADM Edwin B.

Interview of VADM Edwin B. Hooper, conducted by Albert B. Christman

Date of Interview: 710200

Documentation: Index, Transcript 78 pp.

Interview number: S-78

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Hooper describes his personal background and his contact with Parsons at the Naval Proving Ground at Dahlgren, Va. He discusses Parsons' influence on the post-war structure of Navy R&D. Hooper comments on his post-war contacts with Parson on the Atomic Energy Commission, Military Liaison Committee, and socially. He also talks about the Salt Wells Pilot Plant.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Rivero, ADM Horacio Smith, VADM Levering

Institutions: Naval Ordnance Test Station

Naval Proving Ground Atomic Energy Commission

Other added entries: Salt Wells Pilot Plant

Hooper, VADM Edwin B.

Interview of VADM Edwin B. Hooper, conducted by CAPT Robert L. Hansen, Dr. Peter Bruton, and Mrs. Susan Frutkin

Date of Interview: 740000

Documentation: 4 Tapes, Transcript 135 pp.

Interview number: BA-10

Abstract: This interview contains VADM Hooper's opinions on management of Navy R&D since the end of World War II. Topics include Bureau of Ordnance management, inter-bureau relationships, and the future of Navy R&D.

Repositories: NHC, DTNSRDC

Individuals mentioned: Forrestal, SECNAV James

McNamara, SECDEF Robert S.

Institutions: Naval Weapons Center

Office of Naval Research

Bureau of Ordnance

Other added entries: Foundational Funding

Hooper, ADM Edwin B.

Interview of ADM Edwin B. Hooper, conducted by Richard D. Glasow and Nelson Wood

Date of Interview: 780822

Documentation: Tapes, Transcript

Abstract: ADM Hooper discusses his post-graduate ordnance training at the Naval Post Graduate School, and MIT, and ordnance research during World War II.

Repositories: ARL

Individuals mentioned: Rivero, ADM Horacio

Ward, ADM A. G.

Institutions: Massachusetts Institute of Technology

U. S. Naval Academy

Subjects: Ordnance

Other added entries: Ordnance Training

Hopper, COMO Grace Brewster (Murray)

Interview of COMO Grace Brewster Hopper, conducted by Mike Wallace

Date of Interview: 830000

Documentation: Transcript

Abstract: This is a transcript of the "60 Minutes" interview of COMO Hopper by Mike Wallace. COMO Hopper discusses her background and training, relatives in the Navy, her work with the first computers in the Navy, and her contributions to the development of computer language.

Repositories: RAD

Institutions: Office of Naval Research

Subjects: Computers Computer Language

Other added entries: COBOL

Hopper, COMO Grace Brewster (Murray)

Interview of COMO Grace Brewster (Murray) Hopper

Date of Interview: 830200

Documentation: 6 Tapes

Abstract: This interview is part of the "Women in the Federal Government Project", sponsored by the Arthur and Elizabeth Schlesinger Library on the History of Women in America and funded by the National Endowment for the Humanities. COMO Hopper discusses her work with the first

Navy computers and her contributions in developing computer language.

Repositories: RAD

Institutions: Office of Naval Research

Subjects: Computers
Computer Language

Other added entries: COBOL

Howard, Jim

Interview of Jim Howard, conducted by $\operatorname{\mathtt{Tom}}\nolimits$ Misa and Ed $\operatorname{\mathtt{Todd}}\nolimits$

Date of Interview: 820609

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-1

Abstract: Mr. Howard discusses airplane use in antisubmarine warfare, the systems approach to sonobuoy development from 1952 to the present, and the technical navigator, TACO. He talks about the design of the P-3C aircraft, including the incorporation of computers and TACO, LOFAR and DIFAR. Howard comments on present goals of NADC, including the Advanced Signal Processor, Very High Speed Integrated Circuitry, changes in sonobuoy research, and the Julie sonobuoy.

Repositories: NADC, DTNSRDC

Individuals mentioned: Gleiter, Werner

institutions: Naval Air Development Center

Subjects: Antisubmarine Warfare Research Antisubmarine Warfare Sonobouy Research Sonobuoys Antisubmarine Aircraft Low Frequency Radar

Other added entries: Julie Sonobuoy Project



Jim Howard of the Naval Air Development Center.

Hulburt, Dr. Edward O.

Interview with Dr. Edward O. Hulburt, conducted by Dr. David K. Allison

Date of Interview: 770908

Documentation: 5 Tapes (8 Sides), Transcript 49 pp.

Other interview date: 770822

Abstract: Dr. Hulburt talks about his background and education, work with the Signal Corps Radio Laboratory in Paris during World War I, and listening stations at the front, employment at Johns Hopkins and the University of Iowa, early days of working at NRL, short radio waves and skip distances, ionospheric research, naval camouflage, infrared signaling and detection, the Optics Division, laboratory build-up before World War II, rocket studies and the Vanguard Program, work with World War II scientific societies, his involvement with the International Geophysical Year, and comments on on management of research at NRL from 1949-1955.

Repositories: NRL

individuals mentioned: Taylor, Dr. A. Hoyt

Gunn, Dr. Ross
Tousey, Dr. Richard
Maris, Harry
Dawson, Dr. Leo H.
Bittenger, Charles
Karle, Dr. Jerome
Karle, Dr. Isabella Lugoski

Institutions: Naval Research Laboratory International Geophysical Year U. S. Army Signal Corps Johns Hopkins University

Subjects: Optics Camouflage

Other added entries: Optics Research V-2 Rocket

Vanguard Program Space Research



Dr. Edward O. Hulbert, first Director of Research of the Naval Research Laboratory.

Hunsaker, Jerome Clarke

Interview with Jerome Clarke Hunsaker

Date of Interview: 600000

Documentation: Transcript 112 pp.

Abstract: This interview mentions the Naval Academy, 1904-1908, haval architecture, MIT, research in Europe, stability analysis and wind tunnels, his Navy duty in World War I, flying boats, the first aircraft carrier 1922, non-rigid air ships, and his position as coordinator of research for the Navy, 1940.

Repositories: COL

Institutions: Coordinator of Research and Development (Navy)

Subjects: Naval Architecture

Aircraft Design Wind Tunnels

Other added entries: Flying Boats

Airships

Hunt, F. L. "Pete"

Interview of F. L. "Pete" Hunt, conducted by Albert B. Christman

Date of Interview: 801100

Documentation: 2 Tapes, Transcript 45 pp.

Interview number: DNL-T36

Abstract: Mr. Hunt talks about how he came to the New London lab as a scientist from Columbia University, other scientists from Columbia at the time, and the influence of Harvard University there. He describes wartime work done in New London in sonar, submarine research, and the testing of new concepts and discoveries. Other topics include: Dr. Harold Nash, Dr. Horton, the Commanding Officers at New London, postwar R&D, and the merger of the New London and Newport labs into the Naval Underwater Systems Center in 1970.

Repositories: DTNSRDC

Individuals mentioned: Nash, Dr. Harold

Horton, Dr.

Pryor, CAPT William L. Ide, John

Institutions: Naval Underwater Systems Center Columbia University Office of Scientific Research and Development Harvard University

Subjects: Sonar

Cities: New London, CT.

Newport, RI.

Other added entries: Submarine Research

Hunter, Dr. Hugh

Interview of Dr. Hugh Hunter, conducted by Elizabeth Babcock

Date of Interview: 750530

Documentation: Index, Transcript 26 pp.

Interview number: S-95

Abstract: Dr. Hunter discusses the formation of the Technical Research Board by Dr. Louis T. E. Thompson at NOTS. He talks about Dr. Frederick W. Brown as Technical Director and the relationship between Levering Smith, the Associate TD, and Dr. Thompson when he was TD. Hunter comments on his own move from the Research Division to the Central Staff at NOTS and how the Ballistics Division at NOTS disappeared. Hunter reflects on his move to the Propulsion Division and the importance of varied career experience at NOTS. There is a second interview with Hunter, numbered S-95A, which was conducted on 14 August 1975.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Brown, Dr. Frederick W. Smith, VADM Levering McLean, Dr. William B. Sage, Dr. Bruce Shenk, Dr. John H. Thompson, Dr. Louis T. E.

Wilson, Dr. Haskell G.

Institutions: Naval Ordnance Test Station Naval Weapons Center

Hunter, Dr. Hugh

Interview of Dr. Hugh Hunter, conducted by Albert B. Christman

Date of Interview: 750814

Documentation: Index, Transcript 21 pp.

Interview number: S-95B

Abstract: Dr. Hunter makes general comments on R&D and NOTS/NWC, including working under Dr. William B. McLean, CAPT Hardy, and Dr. Haskell G. Wilson. He comments on the selection of leadership, organizational changes, and the need to justify research at NOTS/NWC. He comments on the transfer of NOTS research findings to the outside world, travel restrictions for NOTS employees, and the future of R&D in the Navy.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bennett, Dr. Ira
Hollingsworth, Dr. Guilford L.
LaBerge, Dr. Walter
McLean, Dr. William B.
Wilson, Dr. Haskell G.
Hardy, CAPT John I.

Institutions: Naval Ordnance Test Station Naval Weapons Center

Hussey, VADM George F.

Interview of VADM George F. Hussey

Date of Interview: 650000

Documentation: Transcript 582 pp.

Abstract: VADM Hussey talks about his education at the Naval Academy, particularily courses in ordnance and ballistics, and the work in the Bureau of Ordnance Armor and Projectile Section. He discusses his service as Proof Officer at the Naval Proving Ground, in Mine research, and as Assistant Chief and Chief of the Bureau of Ordnance, and gives his opinions of contractor-operated ordnance plants and postwar ordnance research.

Repositories: COL, NHC

Institutions: Naval Proving Ground

Bureau of Ordnance

Subjects: Ordnance

Cities: Dahlgren, VA.

Hussey, VADM George F. Thompson, Dr. Louis T. E.

Interview of VADM George F. Hussey and Dr. Louis T. E. Thompson, conducted by Albert B. Christman

Date of Interview: 660400

Documentation: Index, Transcript 110 pp.

Interview number: NOTS-75201-S5

Abstract: This extensive interview includes a history of Navy ordnance bases from around 1910 to after World War II. It includes a discussion of whether NOTS should be a research or a test station. Thompson and Hussey also describe RADM William S. Parsons' relations with scientific community and his work on the Proximity Fuze Project. They comment on ADM Hussey's time as head of BUORD and James Forrestal's tenure as Secretary of the Navy.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Blandy, ADM George

Burroughs, ADM Sherman E. Forrestal, SECNAV James Michelson, Dr. Albert A. Moulton, Prof. Forest Ray Parsons, RADM William S. Schoeffel, RADM Malcom F. Schuyler, CAPT Michael Tuve, Dr. Merle

Institutions: Naval Ordnance Test Station

Subjects: Ordnance

Other added entries: Proximity Fuze

Hustvedt, VADM Olaf M.

Interview of VADM Olaf M. Hustvedt, conducted by Fred Durant, Paul Garber, Lou Casey, and Erling Hustvedt.

Date of Interview: 720211

Documentation: Transcript 37 pp.

Interview number: S-80

Abstract: VADM Hustvedt comments on his associations with Dr. Robert Goddard and the Navy-Army bombing tests against OSTFRIELAND and FRANKFURT -- old German warships. He discusses the actions of COL (later GEN) Billy Mitchell during those tests and talks about the explosion of the dirigible, SHENANDOAH, in 1925.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Goddard, Dr. Robert

Mitchell, GEN William

Landsdown, Mrs.

Institutions: Bureau of Ordnance

Bureau of Ordnance Experimental Section

Other added entries: Aerial Bombing

Airships

USS SHENANDOAH (ZR) Rocket Research

Jackson, VADM Andrew McBurney, Jr.

Interview of VADM Andrew McBurney Jackson, Jr.

Date of Interview: 711100

Other interview date: 720400

Documentation: Index, Transcript 385 pp.

Abstract: Naval aviator, project officer in design of Grumman F6F Hellcat at Bureau of Aeronautics, later served

with Atomic Energy Commission.

Repositories: NHC, NWCM, USNA, USNI

Institutions: Atomic Energy Commission

Bureau of Aeronautics

Other added entries: Grumman F6F

Aircraft Design

James, Richard

Interview of Richard James, conducted by Tom Misa and

Date of Interview: 820719

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-13

Abstract: Mr. James discusses his personal background and the organization and history of the LAMPS project from 1968 to the present. Included in the LAMPS history are sections on LAMPS as an air and ship project, the importance of documentation in the program, and relations between NADC and NAVAIR on LAMPS. He also talks about IBM's role in LAMPS.

Repositories: NADC, DTNSRDC

Individuals mentioned: Janaco, Tom

Institutions: Naval Air Development Center Naval Air Systems Command International Business Machine Company Sikorsky

Subjects: Antisubmarine Warfare Antisubmarine Aircraft Helicopters

Other added entries: Light Airborne Multi-Purpose System

Jennison, James H.

Interview of James H. Jennison, conducted by J. D. Gerrard-Gough

Date of Interview: 751025

Documentation: Transcript 27 pp.

Interview number: 5313-S-99

Abstract: Mr. Jennison discusses his background, the Mark 13 torpedo, and changes at the NOTS-Pasadena laboratory when

the Navy took it over. He describes his work with Variable Angle Launcher and the benefits of working with the NOTS-China Lake team.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Lindvall, Dr. Frederick C.

Saylor, William

Thompson, Dr. Louis T. E.

Institutions: Naval Weapons Center Naval Ordnance Test Station Bureau of Ordnance

Other added entries: Torpedo Mark 13 Variable-Angle Torpedo Launcher

Jennison, James H.

Interview of James H. Jennison, conducted by Albert B. Christman

Date of Interview: 780315

Documentation: 1 Tape, Transcript 17 pp.

Interview number: DNL-T6-78

Abstract: Mr. Jennison discusses the recruitment of qualified scientists for the Navy's West Coast labs - in particular, the role of the Board of Scientists and the Civil Service Commission and competition with private industry. He comments on the increasing amount of bureaucracy involved in running a lab and notes a few examples. In addition, Jennison explains the problems involved in procuring supplies and awarding contracts because of recent government regulations. He talks about his work at the Pasadena Annex of NOTS, the Annex's absorbtion into NUC in San Diego, and his move to San Diego. He describes advantages that small labs like the Annex have over larger labs like NOTS labs still offer good opportunities for scientists and engineers who want to work in R&D and others who want to work in management

Repositories: NHC, DTNSRDC

Institutions: Naval Ordnance Test Station Naval Undersea Center Naval Ocean Systems Center Pasadena Annex Naval Weapons Center Cities: Pasadena, CA. San Diego, CA.

Johnson, Charles Y.

Interview of Charles Y. Johnson, conducted by Dr. David K. Allison

Date of Interview: 790525

Documentation: 11 Tapes (22 Sides), Typewritten index 10 pp.

Other dates of interviews: 790108, 790111, 790115

Abstract: Dr. Johnson discusses his background and education, working conditions and radar development at NRL during World War II, his transfer to the NRL Communications Security Group, upper air research, telemetry systems, buzz bomb defense, V-2 rockets, Aerobee rockets, testing at White Sands, the Viking rocket on the NORTON SOUND, cryogenic fuel problems, cosmic ray experimentation, gamma ray detectors, and the ONR Skyhook Program. He details the effect of Sputnik on research programs, the exodus from NRL to Goddard, the loss of NSF and DNA funding, satellite navigation and communications, use of mass spectrometers, the SOLRAD Hi satellite, Skylab, and ionospheric research.

Repositories: NRL

Individuals mentioned: Young, Dr. Leo C. Bourland, Langford
Chubb, Dr. Talbot A.
Reed, Edith
Pressly, Eleanor
Holmes, Julian
Kegley, Larry
Taylor, Dr. A. Hoyt
Gebhard, Dr. Louis A.
Cleeton, Dr. Claud E.
Hagen, Dr. John P.

Institutions: Naval Research Laboratory
Office of Naval Research
National Aeronautics and Space Administration

Subjects: Telemetry
Cosmic Rays
Gamma Rays
Radar
Radio Communications
Radio Transmitters

Satellites

Skyhook

Cities: White Sands, NM.

Other added entries: Atmospheric Research Viking Rocket V-2 Rocket Aerobee Rocket Kawai Rocket Saturn Rocket Skylab Ionospheric Research USS NORTON SOUND

Johnson, Charles Y.

Interview of Charles Y. Johnson, conducted by Peg Shea and Allan Needell $\,$

Date of Interview: 820303

Documentation: Tapes, 5.5 hours, Transcript, 61 pp.

Other date of interview: 820421

Abstract: These interviews trace Johnson's work at NRL, beginning with World War II assignments, his contact with the atomic bomb, post work in the rocket-sonde division, and the V-2 program, the organizational structure of NRL, his involvement with the IGY, Project Vanguard, the formation of NASA, and NASA's relationship with NRL, the NRL satellite program, Aerobee and Viking projects, and continuing work in cosmic ray physics.

Repositories: NASM

Individuals mentioned: Krause, Dr. Ernst H.

Hagen, Dr. John P. Rosen, Milton Newell, Dr. Homer E. Tousey, Dr. Richard Friedman, Dr. Herbert

Institutions: Naval Research Laboratory
International Geophysical Year
National Aeronautics and Space Administration

Subjects: Ionospheric Physics Rocketry Radar

Satellites

Cities: White Sands, NM.

Other added entries: Vanguard Program Cosmic Ray Physics Aerobee Rocket Viking Rocket Manhattan Project Rocket-Sonde

Johnson, Dr. Frances Severin

Interview of Dr. Frances Severin Johnson

Date of Interview: 820623

Documentation: Tapes, 3 hours, Transcript, 58 pp.

Abstract: The interview covers Johnson's early life and education in Canada, his training in physics at the University of Alberta, and graduate school at Berkeley and UCLA. He discusses work on the V-2 rocket research program with Tousey, Hulburt, and Krause at NRL.

Repositories: NASM

Individuals mentioned: Hulburt, Dr. Edward O.

Tousey, Dr. Richard Krause, Dr. Ernst H.

Institutions: Naval Research Laboratory

University of Alberta

Subjects: Solar Physics

Meteorology

Other added entries: V-2 Rocket

Solar Spectrograph

Johnson, ADM Roy L.

Interview of ADM Roy L. Johnson

Date of Interview: 801200

Documentation: Index, Transcript 350 pp.

Abstract: ADM Johnson, a Naval aviator, discusses the seaplane as weapons system, and the effectiveness of PBY

flying boats.

Repositories: NHC, NWCM, USNA, USNI

Subjects: Flying Boats

Seaplanes

Other added entries: PBY Flying Boat

Jones, Dr. Earl

Interview of Dr. Earl Jones, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 780315

Documentation: Transcript 27 pp.

Interview number: DNL-T-3-78

Other interview date: 780310

Abstract: Dr. Jones discusses his personal background, personnel research in World War I and World War II, and the rationale behind and need for personnel research. He comments on the effect of policy decisions on the labs, the differences in personnel research in the 1960's and 1970's, manpower problems, and the effect of computers on personnel research. Jones talks about the creation of NPRDC, its equipment needs, and location. He explores the sources for new research, personnel research in wars and crises, and high-tech personnel requirements of the Navy. Jones also reflects on NPRDC's history and the influence of Dr. Edward Dudek.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Dudek, Dr. Edward

Zumwalt, ADM Elmo

Institutions: Navy Personnel Research and Development Center

Other added entries: Personnel Research Manpower Modeling

Keener, Charles E.

Interview of Charles E. Keener, conducted by Tom Misa and Ed Todd

Date of Interview: 820628

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-3

Abstract: Mr. Keener discusses his arrival at NADC in 1945, his educational background, and the uses of radar in World War II. He describes his career at NADC, including work with AEEL, AWRD, and his position as Director of the Technical Intelligence Department. Keener comments on NADC from 1945 to the early 1950's, the rise of contract monitoring functions of NADC, and the re-organization or AWRD into SAED. He talks about overall re-organizations at the center and the systems approach.

Repositories: NADC, DTNSRDC

Institutions: Naval Air Development Center Air Warfare Research Department Applied Electrical and Electronics Laboratory Systems Analysis and Electronics Department Naval Air Modification Unit

Subjects: Systems Approach Communications Radar Aicraft Antennas

Other added entries: Polaris Program Submarine Communications Very Low Frequency Communications Keil, Dr. Alfred H.

Interview of Dr. Alfred H. Keil, conducted by Enid Kumin

Date of interview: 751010

Documentation: Transcript 79 pp.

Abstract: Dr. Keil describes how he was offered a job by the United States War Department in 1947 after working for the German Navy during World War II, how he worked for BUSHIPS and later the David Taylor Model Basin where he was in charge of the structures laboratory and later became the Technical Director, his involvement in long-range planning for weapons systems, ocean technology, his later work at MIT, work on various committees, and thoughts on naval architecture.

Repositories: MIT, DTNSRDC

Institutions: David Taylor Model Basin
Massachusetts Institute of Technology
National Science Foundation
Marine Science Council
Naval Ship Research and Development Center

Other added entries: Ocean Technology Deep Submersibles Long Range Planning

Kelly, CAPT James F.

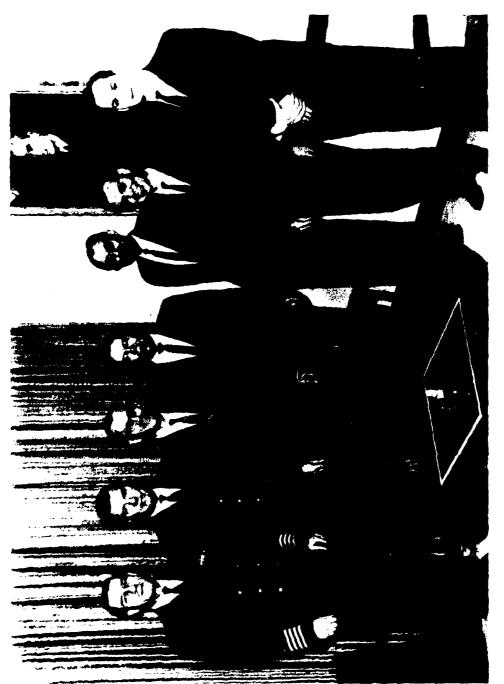
Interview of CAPT James F. Kelly, conducted by Roger Kempler

Date of Interview: 820922

Documentation: Index, Transcript 32 pp.

Abstract: CAPT Kelly describes his appointment as Commanding Officer of NPRDC, how NPRDC is perceived in Washington, and human factors engineering. He talks about orienting the SYSCOMs, re-organizing NPRDC, and the serious the expansion of NPRDC, the organizational location of NPRDC, and competition for funds with R&D labs. He comments on the possible merger of NOSC and NPRDC, the NAVMAT Inspector General's report on NPRDC, and major contributions of NPRDC over the last ten years.

Repositories: DTNSRDC, NPRDC



Aerodynamics Laboratory; Dr. Alfred H. Keil, Technical Director; Dr. William E. Cummins, Head, Hydromechanics Laboratory; Mr. Gene H. Gliessner, Head, Applied Mathematics Laboratory; Dr. William W. Murray, Head, Structural Mechanics Laboratory; Dr. Alan Powell, Head, Acoustics and Vibration Laboratory. David Taylor Model Basin Technical Directorate, Summer 1966. Left to right: Captain D.K. Ela, Commanding Officer and Director; Captain D.J. O'Meara, Head,



Dr. James W. Tweedale, Technical Director, and Captain James F. Kelly, Jr., Commanding Officer of the Navy Personnel Research and Development Center.

Individuals mentioned: wnittle, ADM Alfred J., Jr. Regan, Dr. James J.

Institutions: Navy Personnel Research and Development Center Naval Ocean Systems Center

Naval Material Command

Cities: San Diego, CA.

Other added entries: Technical Director

Commanding Officer Inspector General Personnel Research

Kendig, Dr. Paul M.

Interview of Dr. Paul M. Kendig, conducted by Richard D. Glasow

Date of Interview: 800213

Documentation: Tapes, Transcript

Abstract: Dr. Kendig describes his background and education, and his work at the Harvard Underwater Sound Laboratory and the Applied Research Laboratory.

Repositories: ARL

Individuals mentioned: Pielemeier, Dr. Walter H.

Walker, Eric A.

Institutions: Pennsylvania State University

Harvard University

Underwater Sound Laboratory Applied Research Laboratory

Other added entries: Acoustics Research

Kirk, ADM Alan Goodrich

Interview of ADM Alan Goodrich Kirk

Date of Interview: 610000

Documentation: Transcript 386 pp.

Abstract: ADM Kirk recalls his career in the Navy, including his education at the Naval Academy, and work at the Naval

Proving Ground and the Bureau of Ordnance.

Repositories: COL. NHC

Institutions: Naval Proving Ground

Subjects: Ordnance

Cities: Dahlgren, VA.

Koesey, Calvin

Interview of Calvin Koesey, conducted by Albert B. Christman $\,$

Date of Interview: 780000

Documentation: Tape, Transcript 13 pp.

Interview number: DNL-T21-78

Abstract: Mr. Koesey talks about his role at the Naval Underwater Systems Center, including R&D work during the Vietnam War. Research topics covered are mine work, harbor defense, and problems of coastal navies. He also discusses laboratory representatives in Vietnam and the Navy's role in Korea.

Repositories: DTNSRDC

Institutions: Naval Underwater Systems Center

Other added entries: Vietnam Laboratory Assistance Program

Krause, Dr. Ernst H.

Interview of Dr. Ernst H. Krause, conducted by Dr. David H. DeVorkin

Date of Interview: 820810

Documentation: Tapes, 6 hours, Transcript, 122 pp.

Other date of interview: 830701

Abstract: Dr. Krause talks about his education, training in physics, and interests in nuclear physics and spectroscopy. At NRL during World War II, he worked in the Communications Security Section, optics, and development of pulse guidance systems, and was involved in the interrogation of German missile scientists and Operation Paperclip. He describes the organization of the Rocket-Sonde section, his role in the V-2 program, co-workers, contacts with Federal Contract Research Centers, and his research in cosmic ray physics.

Repositories: NASM

Individuals mentioned: Toftoy, BG Holger N. Friedman, Dr. Herbert Malina, Dr. Frank J. Braun, Wernher von Tousey, Dr. Richard Schein, Prof. Marcel Pickering, Dr. William H. Schwinger, Dr. Julian S.

Institutions: Naval Research Laboratory Applied Physics Laboratory California Institute of Technology Jet Propulsion Laboratory

Subjects: Physics Cosmic Rays Space Astronomy

Cities: White Sands, NM.

Other added entries: Rocket-Sonde
Operation Paperclip
Research Management
Cosmic Ray Research
Dynasoar
V-2 Rocket
Neptune
Viking Rocket
Aerobee Rocket

Kron, Dr. Gerald Edward

Interview of Dr. Gerald Edward Kron, conducted by Dr. David H. DeVorkin

Date of interview: 780520

Documentation: Tapes, 1 1/2 hrs., Transcript 28 pp.

Abstract: Dr. Kron speaks about his education and background, work at Berkeley and Lick Observatory, World War II at MIT and Caltech, post-war employment, and work at the Naval Observatory.

Repositories: AIP

Institutions: Naval Observatory

Subjects: Astronomy

Other added entries: Photoelectric Photometry

Krutter, Dr. Harry

Interview of Dr. Harry Krutter, conducted by Albert B. Christman

Date of Interview: 780400

Documentation: Transcript 23 pp.

Interview number: DNL-T18-78

Abstract: Dr. Krutter talks about his background at the Massachusetts Institute of Technology, his arrival at NADC in 1949, and NADC's early chief scientists. He comments on his time as Technical Director from 1956 to 1972, the direction of Navy R&D work, and the Bureau of Aeronautics and later the Naval Air Systems Command. Dr. Krutter discusses the Navy re-organization of 1965-1966, the cooperation between Navy labs, and his reasons for retiring from NADC. He expostulates in particular on the role of the Director of Navy Laboratories and Chief of Naval Material in running the labs and the major accomplishments of NADC.

Repositories: DTNSRDC, NAUC

Institutions: Naval Air Development Center Director of Navy Laboratories

Naval Air Systems Command Bureau of Aeronautics Chief of Naval Material

Other added entries: Technical Director

Krutter, Dr. Harry

Interview of Dr. Harry Krutter, conducted by Tom Misa and Ed Todd

Date of Interview: 820628

Documentation: 2 Tapes, Index 3 pp.

Interview number: NADC-2, 3

Abstract: Dr. Krutter describes his academic background, his time at an NRL field station, and his professorial days at Penn State. He discusses the Bureau of Aeronautics' consolidation of facilities at Johnsville, Pa., the NRL field station's switch to becoming the Radar Division of the Aeronautical Electronics and Electrical Laboratory, and projects of the center in the early 1950's. Krutter comments on the formation of the Anti-Submarine Warfare Laboratory in 1958, BUAER's relationship to NADC, and his appointment as chinf scientist of NADC in 1956. He talks about center reorganizations, the systems approach, and Navy lab reorganization, in general, from 1965 to 1968. He mentions the Phoenix Missile System, its predecessor, the Eagle Missile System, and the hybrid digital-analog computer, Typhoon. Krutter reflects on the change in the nature of NADC's work and his career as Technical Director.

Repositories: NADC

Individuals mentioned: Gloeckler, Fred W.
Black, Dr. K. C.
Tremblay, Harold
McNamara, SECDEF Robert S.
Driggs, Ivan

Institutions: Naval Air Development Center
Bureau of Aeronautics
Naval Research Laboratory
Aeronautical Instruments Laboratory
Aircraft Armament Laboratory
Anti-Submarine Warfare Laboratory
Aeronautical Electronics and Electrical Laboratory

Subjects: Antisubmarine Warfare Research



Dr. Harry Krutter of the Naval Air Development Center.

Fire Control Systems
Antisubmarine Warfare
Missile Systems
Airborne Early Warning Radar
Systems Approach
Computers
Radar

Cities: Johnsville, PA.

Other added entries: Technical Director Airborne Height Finder Typhoon Project Eagle Missile Project Phoenix Missile Project

Kunz, D. A.

Interview of D. A. ("Bud") Kunz, conducted by J. D. Gerrard-Gough

Date of Interview: 751023

Documentation: Index, Transcript 9 pp.

Interview number: S-104

Abstract: Mr. Kunz comments on the Navy's problems with torpedos during World War II and the group put together to solve them. He talks about the Variable-Angle Launcher and acoustic torpedo built at Morris Dam. Kunz describes administration problems at NOTS, his nuclear work and the role of the General Tire and Rubber Company.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Saylor, William

Institutions: Naval Ordnance Test Station

Subjects: Torpedos Acoustic Torpedos

Other added entries: Variable-Angle Torpedo Launcher

Land, ADM Emory S.

Interview of ADM Emory S. Land

Date of Interview: 630000

Documentation: Transcript 227 pp.

Abstract: In this interview ADM Land discusses his study at the Naval Academy and MIT, naval architecture, his work in the Bureau of Ships, and Bureau of Aeronautics, Harry Guggenheim and air research, his service as Chief of the Bureau of Ships, and shipbuilding for the National Defense Agency.

Repositories: COL, NHC

Individuals mentioned: Guggenheim, Harry

Institutions: Bureau of Ships Bureau of Aeronautics National Defense Agency Massachusetts Institute of Technology U. S. Naval Academy

Subjects: Naval Architecture Naval Construction

Landweber, Dr. Louis

Interview of Dr. Louis Landweber, conducted by Seth Hawkins

Date of Interview: 831028

Documentation: 2 Tapes, 1 Diskette, Transcript 30 pp.

Abstract: Dr. Landweber describes his work at the Experimental Model Basin in the Washington Navy Yard starting in 1932, including coworkers, towing tank conferences, experiments in cable towing and ship rolling, early work by Scott Russell and William Froude, eliminating vibration of submarine periscopes, construction of the model basin at Carderock, and explosives testing.

Repositories: DTNSRDC

Individuals mentioned: Schoenherr, Dr. Karl E.

Tase, Johnny Russell, Scott Froude, William Mumma, RADM Albert G. Saunders, CAPT Harold E. Rabinowitz, Leo Thorne, George Norley, William Hewins, Dr. Lyman

Institutions: Experimental Model Basin
David Taylor Naval Ship Research and Development Center
David Taylor Model Basin

Cities: Washington, DC. Carderock, MD.

Other added entries: Model Testing

Langenbeck, Earl H.

Interview of Earl H. Langenbeck, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 780331

Documentation: 1 Tape, Transcript 16 pp.

Interview number: DNL-T11-78

Abstract: Mr. Langenbeck discusses his time at the Naval Gun Factory and the Navy Yard during World War II and after and compares the amount of bureaucracy and the ability to get things done during the war with the postwar period. He talks about problems involved in contracting defense research out, added regulations created for labs by non-R&D oriented people, and the consolidation of the Navy lab system. Langenbeck also recommends people for future interviews.

Repositories: DTNSRDC

Individuals mentioned: Probus, Dr. James H.
Bennett, Dr. Ralph
Hartmann, Dr. Gregory

Institutions: Naval Surface Weapons Center Naval Ordnance Laboratory Naval Weapons Laboratory Naval Gun Factory

Cities: White Oak, MD. Dahlgren, VA. Washington, DC.

Other added entries: Contracting Laboratory Consolidations

Laser History

Laser History, conducted by Dr. David K. Allison

Date of Interview: 810304

Other date of interview: 810312

Documentation: 3 Tapes (6 Sides)

Abstract: This is a series of interviews done to document laser technology at NRL. The interviews consist of descriptions and explanations of individual photographs of equipment. The tapes are keyed to photographs in storage at the Washington National Records Center in Suitland, MD.

Repositories: NRL

Institutions: Naval Research Laboratory

Other added entries: Laser Research

Laser History

Lauritsen, Dr. Charles C. Hardy, CAPT John I. Robinson, K. H.

Dedication of Weapon Exhibit Center

Date of Interview: 641104

Documentation: Index, Transcript 18 pp.

Interview number: NOTS-75201-S3

Abstract: This is a transcript of a speech made at the dedication of Weapon Exhibits Center at NOTS in Inyokern, CA. Among the topics discussed are RADM Parsons' proximity fuze, the submarine as a menace to U.S. ships, and the United Kingdom's use of submarine detectors. In addition, Lauritsen talks about the establishment of NOTS and its top officers.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E.

Institutions: Naval Ordnance Test Station National Defense Research Committee

Other added entries: Rocket Research Submarine Detectors Proximity Fuze

Lauritsen, Dr. Charles C.

Interview of Dr. Charles C. Lauritsen, conducted by Albert B. Christman

Date of Interview: 660400

Documentation: Index, Transcript 28 pp.

Interview number: NOTS-75201-S4

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. Lauritsen discusses his overall impression of Parsons, his early contacts with him, and Parsons' work on the Proximity Fuze Project. In addition, Lauritsen reflects on Parsons' Manhattan Project involvement and his early connection with NOTS. He talks about CAPT Burroughs' role at NOTS and British-American scientific cooperation during World War II.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S. Burroughs, ADM Sherman E. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station Office of Scientific Research and Development California Institute of Technology

Other added entries: Proximity Fuze Manhattan Project

Lauritsen, Dr. Thomas

Interview of Dr. Thomas Lauritsen, conducted by Albert B. Christman ${\bf B}$

Date of Interview: 690626

Documentation: Index, Transcript 20 pp.

Interview number: NWC-75201-S68

Abstract: Dr. Thomas Lauritsen comments on his father, Dr. Charles Lauritsen - his allegiance to the U. S., his ability to make decisions, his personal characteristics, and his international outlook. Thomas Lauritsen discusses Nils Bohr, British rocket research, and NDRC and OSRD. He talks about project work at CalTech, propellant problems for rockets, and a disappointing rocket test at Goldstone Lake. He also describes RADM William S. Parsons' influence on Navy R&D and military-civilian relationships, in general.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bohr, Dr. Nils
Fowler, Dr. William
Lauritsen, Dr. Charles C.
Parsons, RADM William S.

California Institute of Technology Naval Ordnance Test Station

Cities: Goldstone Lake, CA.

Other added entries: Rocket Research

Rocket Propellents

Law, Howard

Interview of Howard Law, conducted by Dr. David K. Allison

Date of Interview: 830812

Documentation: 2 Tapes, Diskette, Transcript 41 pp.

Abstract: Mr. Law describes his education, military experience in the Bureau of Ordnance, work at NWC and the Naval Ordnance Plant in Georgia, and employment in 1965 with BUWEPS in Washington, DC. He comments on the difference between BUWEPS laboratory management and the early days of the DNL organization, his work in 6.5 funding, management

styles and changes, "shore establishment realignments" - the consolidations of NSRDC, NOSC, NSWC, and NUSC, the role of the Facilities Division, the FCRCs, program reviews, Corporate Planning, the VLAP and NSAP programs, SHORESTAMPS, and the need for the laboratories to work harder at developing leaders.

Repositories: DTNSRDC

Individuals mentioned: Lawson, Dr. Joel
Hillyer, Robert
Kidd, ADM Issac C., Jr.
Kleback, Thomas
Johnson, Dr. Gerald
Smith, Howard
Towle, CAPT Bernard
Probus, Dr. James H.

Institutions: Director of Navy Laboratories
Federal Contract Research Centers
Systems Commands
Bureau of Ordnance
Bureau of Weapons
Naval Ship Research and Development Center
Naval Ocean Systems Center
Naval Surface Weapons Center
Naval Underwater Systems Center

Other added entries: Shore Establishment Realignments Vietnam Laboratory Assistance Program Navy Science Assistance Program Corporate Plan Navy Industrial Fund Laboratory Consolidations

Lawson, Dr. Joel

Interview of Dr. Joel Lawson, (onducted by .Dr. Samuel Rothman and Mrs. Susan Frutkin

Date of Interview: 750000

Documentation: 2 Tapes, Transcript 64 pp.

Interview number: BA-2-75

Abstract: Dr. Lawson comments on his position as Special Assistant for Electronics, and on Robert A. Frosch as ASN (R&D). He talks about becoming Director of Navy Laboratories, his views on the DNL/DLP charter, block funding, and his management objectives. Lawson discusses his

role as DNL, competition between the labs, and bringing CO's and TD's together. He describes the impact of the consolidation of the labs, the DNL as intercessor between the labs and their resources, and the labs problems in general. He explains lab budgeting, talks about work that is contracted out, and the relationship between the DNL and the Chief of Naval Operations. He comments on the effects of the SYSCOMs losing control of the labs. Also included are sections on Project REFLEX, the effect of numerous studies of the labs, and trends in lab management.

Repositories: DTNSRDC, NHC

Individuals mentioned: Foster, Dr. John S.

Frosch, Dr. Robert A.
Morse, Dr. Robert W.
Zumwalt, ADM Elmo
Kidd, ADM Issac C., Jr.

Institutions: Director of Navy Laboratories
Chief of Naval Material
Assistant Secretary of the Navy (R&D)
Chief of Naval Development
Director of Defense Research and Development
Systems Commands

Other added entries: Project REFLEX Laboratory Consolidations

Lewis, Russell

Interview of Russell Lewis, conducted by Albert B. Christman $% \left(1\right) =\left(1\right) +\left(1\right$

Date of Interview: 780000

Documentation: 1 Tape, Transcript 21 pp.

Interview number: DNL-T16-78

Abstract: Mr. Lewis comments on his work with sonar during World War II at New London, CT., his time on the USS ISLAND, and the influence of Columbia University and Harvard University scientists on the New London lab. He talks about the consolidation of the New London and Newport labs into NUSC, Navy sonar work at New London in the postwar era and its use in the Fleet, and the labs' role in the Vietnam War.

Repositories: DTNSRDC

Individuals mentioned: Clearwater, Walter

Horton, Dr.

Institutions: Naval Underwater Systems Center

Subjects: Sonar

Other added entries: Vietnam War Laboratory Consolidations

Lockhart, Dr. Luther

Interview of Dr. Luther Lockhart, conducted by Dr. David K. Allison

Date of Interview: 790703

Documentation: 4 Tapes, Index 6 pp.

Other interview date: 790710

Abstract: Dr. Lockhart talks about his background and education, conditions at NRL during World War II, airplane anti-static wicks, lense coatings for binoculars, restructuring of Chemistry Division after the war, research in atmospheric radioactivity, laser research, work on chemical coatings.

Repositories: NRL

Individuals mentioned: Zisman, Dr. William A.

Institutions: Naval Research Laboratory

Other added entries: Spectroscopy

Polymers Spectrometry Laser Technology Chemical Coatings Lockwood, VADM Charles A.

Interview of VADM Charles A. Lockwood

Date of Interview: 650000

Documentation: Transcript 720 pp.

Abstract: VADM Lockwood recalls his career and developments in submarine technology, including captured German submarines, SQUALUS rescue operations, periscope photography, the inventions of sonar, radar, and nuclear propulsion, and the development of the atomic submarine.

Repositories: COL, NHC

Subjects: Nuclear Propulsion

Sonar Radar

Other added entries: USS SQUALUS

Atomic Submarines

Captured German Equipment

McDowell, Rensler

Interview of Rensler McDowell, conducted by Richard D. Glasow

Date of Interview: 800820

Documentation: Tapes, Transcript

Abstract: Mr. McDowell describes his role in acoustics

research at the Newport Naval Torpedo Station.

Repositories: ARL

Institutions: Naval Torpedo Station

Cities: Newport, RI. Goat Island, RI.

Subjects: Torpedos

Other added entries: Acoustics Research

Ordnance Research

Lyddane, Dr. Russell H.

"Times of Crisis: Dr. Russell H. Lyddane", conducted by Cynthia Rouse

Date of Interview: 770124

Documentation: Transcript 14 pp.

Abstract: This interview is Chapter VII in <u>Dahlgren</u>, edited by Kenneth G. McCollum

Abstract: Dr. Lyddane discusses the work environment at Dahlgren, the work of the Naval Gun Factory, ballistics tables, projectile testing, torpedo fuzes, the Computation Laboratory, the Armor and Projectile Laboratory, problems in position classification, the Fleet Ballistic Missile Program, the change in name in 1959 and relationship with NOL, White Oak.

Repositories: NSWC, DTNSRDC

Institutions: Naval Proving Ground Naval Ordnance Laboratory Naval Gun Factory

Subjects: Ordnance Ballistics

Other added entries: Fleet Ballistic Missile Program

Technical Director

McKibbin, Mrs. Joseph (Dorothy)

Interview of Mrs. Joseph McKibbin, conducted by Albert B. Christman ${\bf B}$

Date of Interview: 670100

Documentation: Index, Transcript 29 pp.

Interview number: NOTS-75201-S28

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Mrs. McKibbin discusses Parsons' attitude toward the office, his family life, his appearance, and what others thought of him.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Carmondy, Hazel

Parsons, RADM William S. Oppenheimer, Dr. Robert Parsons, Martha

Cities: Los Alamos, NM.

Other added entries: Manhattan Project

McLean, Edith LaVerne (Mrs. William B.)

Interview of Mrs. LaVerne McLean, conducted by William F. Wright

Date of Interview: 800318

Documentation: Index, Transcript 48 pp.

Interview number: S-113

Abstract: Mrs. McLean discusses Dr. William B. McLean's personal habits, social abilities, and relationships with Navy personnel. She describes his work habits, his role in the Sidewinder Missile Project, and his appointment as Technical Director of NWC. Mrs. McLean conveys McLean's feelings on war, in general, and on the use of Sidewinder in Korea and Vietnam. She also talks about McLean's delegation of authority when necessary, particularly to Dr. Haskell G. Wilson.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B. McLean, Edith LaVerne (Mrs. William B.) Wilson, Dr. Haskell G.

Institutions: Naval Ordnance Test Station Naval Weapons Center

Other added entries: Sidewinder Missile Project

Korean War Vietnam War McLean, Edith LaVerne (Mrs. William B.)

Interview of Mrs. Edith LaVerne ("LaV") McLean, conducted by Starla E. Hall

Date of Interview: 800617

Documentation: Transcript 38 pp.

Interview number: DNL-T23-80

Abstract: Mrs. McLean discusses the personal life of her husband, Dr. William B. McLean, who was the Technical Director of NOT/NWC and NUC. Included are sections on McLean's relationships with his sons, his hobbies at home, McLean as a husband. Mrs. McLean comments on life at NOTS, her husband as TD there, and the other scientists that made up the NOTS/NWC team. She talks about their family's move to San Diego, the establishment of NUC, and her husband's health; also his interests outside of science and the Sidewinder Missile Project.

Repositories: DTNSRDC

Individuals mentioned: McLean, Dr. William B.

McLean, Mark

McLean, Edith LaVerne (Mrs. William B.)

McLean, Jack

Institutions: Naval Ordnance Test Station

Naval Weapons Center Naval Undersea Center

Other added entries: Sidewinder Missile Project

McLean, Dr. William B.

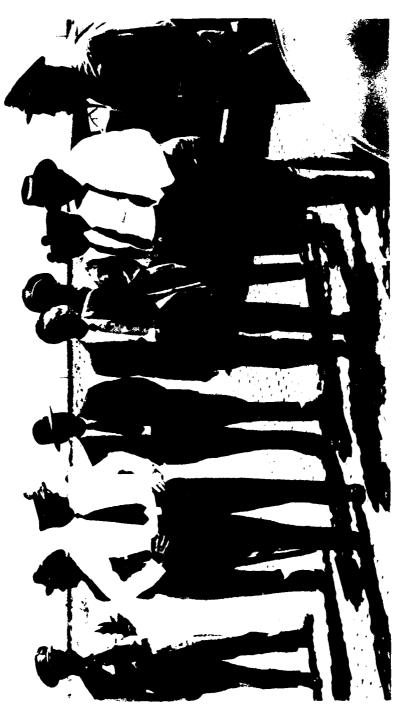
Interview with Dr. William B. McLean, conducted by Albert B. Christman

Date of Interview: 731116

Documentation: Index, Transcript 30 pp.

Interview number: S-88

Abstract: Dr. McLean discusses the development of various Naval missile projects at NOTS, including the Sidewinder and Walleye Missiles. He describes their tracking and launching methods and the politics involved in developing a missile.



Military-civilian conference at Armitage Field, Naval Ordnance Test Station. Fourth from left, Dr. Louis T.E. Thompson (NOTS Technical Director); fifth from left, Dr. William B. McLean (Head, Aviation Ordnance Department); far right, Captain Walter V.R. Vieweg (NOTS Commander); April 1950.



Naval Ordnance Test Station Code 40 (Weapons Development Department) principals. Left to right: Frank Knemeyer, Leroy L. Doig II, Leroy Riggs, circa 1964.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Crawford, Jack A.

Ward, Dr. Newton E.

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Subjects: Guided Missiles Air to Air Missiles

Other added entries: Sidewinder Missile Project

Walleye Missile Project

McLean, Dr. William B.

Interview of Dr. William B. McLean, conducted by Albert B. Christman

Date of Interview: 750700

Documentation: Index, Transcript 44 pp.

Interview number: 5313-S-97

Abstract: Dr. McLean recalls his first association with NOTS, his work in the Fire Control Laboratory, and the need for the Sidewinder Missile. He details his role in the Sidewinder design, his tenure as Head of Aviation Ordnance, and comments on technical layering at NOTS. McLean remembers his time as Technical Director of NOTS, reflects on the role of a TD, and his management style. McLean states that the laboratory re-organization of 1967 failed and talks about the Navy's future; in particular, the need for more submarines.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Hussey, VADM George F.

Lauritsen, Dr. Charles C. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Naval Weapons Center Naval Undersea Center Fire Control Laboratory

Other added entries: Sidewinder Missile Project

Submarine Research Technical Director McLean, Dr. William B.

Interview of Dr. William B. McLean, conducted by Dr. Samuel Rothman and Mrs. Susan Frutkin

Date of Interview: 741212

Documentation: 2 Tapes, Transcript 33 pp.

Interview number: BA-1-75

Abstract: Dr. McLean gives a broad overview of naval laboratories since World War II. First, he comments on the state of NOTS and NOL at the end of World War II. McLean discusses the transfer of the labs to the chief of Naval Material in 1966, the Sherwin Plan, and changes in the Office of the Director of Navy Laboratories. He talks about the effect Congress has on the labs, NIF Funding, and Special Project Offices and Project Managers. He also explains the effect of frequent leadership changes on R&D, significant lab problems from 1958 to 1973, and how to evaluate the results of R&D in peacetime. In addition McLean details the effect of civil service regulations on the labs and how to attract qualified civilians to work on military programs.

Repositories: DTNSRDC, NHC

Individuals mentioned: Thompson, Dr. Louis T. E. Sherwin, Dr. Chalmers
Lawson, Dr. Joel
Rexroth, John
Hayward. ADM John T.
Kidd, ADM Issac C., Jr.

Institutions: Director of Navy Laboratories
Chief of Naval Material
Systems Commands
Naval Ordnance Test Station
Naval Ordnance Laboratory
Department of Defense Research and Engineering

Other added entries: Navy Industrial Fund Sherwin Plan

McMillan, Dr. Edwin M.

Interview of Dr. Edwin M. McMillan, conducted by Albert B. Christman

Date of Interview: 670300

Documentation: Index, Transcript 22 pp.

Interview number: NOTS-75201-S36

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Dr. McMillan describes his and Dr. Robert Oppenheimer's early connections with the Manhattan Project. He reflects on ADM (then CAPT) Parsons' arrival at Los Alamos, NM. and the time he spent working with him. McMillan discusses Parsons' personal character and Parsons' relationship with Oppenheimer.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Groves, GEN Leslie

Oppenheimer, Dr. Robert

Cities: Los Alamos, NM.

Other added entries: Manhattan Project

Martell, VADM Charles B.

Interview of VADM Charles B. Martell

Date of Interview: 740000

Documentation: 3 Tapes

Interview number: BA-16

Repositories: DTNSRDC

Marten, William H.

Interview of William H. Marten, conducted by Roger Kempler

Date of interview: 820730

Documentation: Transcript, 42 pp.

Abstract: Mr. Marten describes his initial exposure to Navy personnel research, the early efforts at billet analysis in the Fleet, beginning and problems in organizing the Navy Personnel Research Activity in San Diego, typical work assignments. describing movie industry jobs for applications in Armed Forces Radio and Television, program development in the 1950s, establishment of NPRDC, NRAC's involvement, coordination with Washington, chosing a Technical Director, and major accomplishments.

Repositories: DTNSRDC

Individuals mentioned: Van Swearingen, CAPT Earl K.

Turney, Robert F.
Rimland, Dr. Bernard
Jones, Dr. Earl
Price, D. George
Sprague, ADM Thomas L.
Zumwalt, ADM Elmo

Institutions: Navy Personnel Research and Development Center Naval Research Advisory Committee

Other added entries: Personnel Research

Billet Analysis

Masterson, VADM Kleber S.

Interview of VADM Kleber S. Masterson

Date of Interview: 721100

Other date of interview: 730400

Documentation: Index, Appendices, Transcript 493 pp.

Abstract: VADM Masterson served as executive member of the Navy Ballistic Missiles Committee, which played a major role in developing Polaris, Chief of the Bureau of Weapons, and as Director of the Weapons Systems Evaluation Group, OSD.

Repositories: NHC, NWCM, USNA, USNI



William H. Marten of the ${\tt Navy\ Personnel\ Research}$ and Development Center.

Institutions: Navy Ballistic Missiles Committee

Bureau of Weapons Secretary of Defense Weapons Systems Evaluation Group

Subjects: Submarine Launched Ballistic Missiles
Ballistic Missile Submarines
Nuclear Powered Fleet Ballistic Missile Submarines
Nuclear Missiles
Weapons Systems

Other added entries: Polaris Program

Meyers, Wesley W.

"The Manhattan and Elsie Projects: Wesley W. Meyers, conducted by Cynthia Rouse

Date of Interview: 761201

Documentation: Transcript 13 pp.

Note: This interview is Chapter VIII of <u>Dahlgren</u>, edited by

Kenneth G. McCollum

Abstract: Mr. Meyers discusses the Manhattan Project and the part Dahlgren and Dahlgren personnel played, the "Sewer Pipe" bomb, testing of atomic projectiles (the Elsie Project), security of atomic devices, and dropping the test bombs.

Repositories: NSWC, DTNSRDC

Institutions: Naval Proving Ground

Other added entries: Manhattan Project

Elsie Project Atomic Weapons Miller, Laymon N.

Interview of Laymon N. Miller, conducted by Richard D. Glasow

Date of Interview: 800821

Documentation: 2 Tapes, Transcript

Abstract: Mr. Miller talks about his work in acoustics and torpedo quieting at the Ordnance Research Laboratory.

Repositories: ARL

Institutions: Ordnance Research Laboratory

Pennsylvania State University

Subjects: Torpedos

Other added entries: Acoustics Research

Moran, VADM William J.

Interview of VADM William J. Moran, conducted by CAPT Robert L. Hansen, $\$

Date of Interview: 750000

Documentation: 1 Tape, Index, Transcript 31 pp.

Interview number: BA-5-75

Abstract: VADM Moran comments on his relationships with various ASN (R&D)'s, changes in the relationship between the ASN (R&D) and OPNAV, and ADM Zumwalt's use of the CNO Executive Board. He recalls his time at NOTS and talks about the shift of lab control to the CNM, the roles of CO's and TD's, and the Navy's success in working with civilians. Moran discusses his tenurcas Director of the Office of RDT&E - Particularly the need to increase interaction with the DCNM's Office, the Ordnance Systems Command's ability to response to new requirements, and the layering of management in Navy R&D.

Repositories: DTNSRDC, NHC

Individuals mentioned: Foster, Dr. John S.

Zumwalt, ADM Elmo

Institutions: Assistant Secretary of the Navy (R&D)

Chief of Naval Material

Chief of Naval Operations Defense Systems Acquisition Review Council Naval Ordnance Systems Command Chief of Naval Operations

Other added entries: Technical Director

Morton, RADM Thomas

Interview of RADM Thomas Morton

Date of Interview: 751090

Other interview date: 760290

Documentation: Index, Transcript 484 pp.

Abstract: RADM Morton served as a gunnery officer on the USS NORTH CAROLINA during World War II, and was the Commanding Officer of the Naval Weapons Laboratory at Dahlgren, Va. from 1960-1961.

Repositories: NHC, NWCM, USNA, USNI

Individuals mentioned: McNamara, SECDEF Robert S.

Institutions: Naval Weapons Laboratory

Naval Surface Weapons Center

Subjects: Ballistic Research Laboratories

Ordnance Laboratories

Ordnance

Cities: Dahlgren, VA.

Other added entries: Commanding Officer

Naval Research Laboratory Meeting

Naval Research Laboratory Meeting

Date of Interview: 810700

Documentation: Tapes, Transcript, 112 pp.

Repositories: NASM

Subjects: Astronomy

Newell, Dr. Homer E.

Interview of Dr. Homer E. Newell, conducted by Dr. Richard F. Hirsh

Date of interview: 8007018

Documentation: Tapes, 3 hrs., Transcript

Abstract: Dr. Newell discusses war work and the rocketsonde program at NRL, the atomic bomb, upper atmospheric research, establishment of the V-2 Panel, Edward Hulburt and Herbert Friedman, the Vanguard Satellite Program, IGY, reaction to the launch of Sputnik, creation of NASA in 1958, his career with NASA, the effects of Vietnam on the space program, and the Space Telescope and Space Shuttle.

Repositories: AIP

Individuals mentioned: Hulburt, Dr. Edward O.

Friedman, Dr. Herbert

Institutions: Naval Research Laboratory
International Geophysical Year

National Aeronautics and Space Administration

Subjects: Astronomy Space Astronomy Space Telescope

Other added entries: Rocket-Sonde

Atmospheric Research

Sputnik V-2 Rocket Vietnam War Vanguard Program Space Shuttle Niedermair, John Charles

Interview of John Charles Niedermair

Date of Interview: 750600

Other interview date: 760400

Documentation: Index, Appendices, Transcript 349 pp.

Abstract: Mr. Niedermair discusses his role in the salvage of the S-4 and S-51 submarines during the 1920's, his many years in the Bureau of Ships, and his design of the tank landing ship (LST). He mentions RADM David W. Taylor's work at the Experimental Model Basin, Taylor's book "The Speed and Power of Ships", and CAPT Harold Saunders' contributions to naval architecture and the science of hydrodynamics.

Repositories: NHC, NWCM, USNA, USNI

Individuals mentioned: Taylor, RADM David W.

Saunders, CAPT Harold E.

Institutions: Bureau of Ships Experimental Model Basin David Taylor Model Basin

Subjects: Submarines Salvage Naval Architecture Hydrodynamics Ship Design Tank Landing Ships

Other added entries: S-4 Submarine

S-51 Submarine

Niemann, Ralph A.

"Development of Computer Technology: Ralph A. Niemann", conducted by Cynthia Rouse

Date of Interview: 781026

Documentation: Transcript 15 pp.

Note: This interview is Chapter X of <u>Dahlgren</u>, edited by

Kenneth G. McCollum

Abstract: Mr. Niemann discusses the first IBM card-feed computers at Dahlgren, the Aiken Relay Computer, computergenerated ballistics tables, the 60 desk calculators used by

WAVES in World War II, the NORC, and advances in speed of computers, use of the NORC in NRL's Vanguard Program, the IBM STRETCH computer, the effect of the Fleet Ballistic Missile Program on computer work at Dahlgren, constructing a facility to house the computers, and management problems.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Cohen, Dr. Charles J.
Bramble, Dr. Charles C.
Ryland, Robert
Walker, John
Gleissner, Gene H.
Burke, William

Institutions: Naval Research Laboratory Naval Proving Ground Naval Weapons Laboratory International Business Machine Company

Subjects: Computers
Fire Control Computers

Cities: Dahlgren, VA.

Other added entries: Naval Ordnance Research Calculator Fleet Ballistic Missile Program Vanguard Program Polaris Program

Nutt, Mr. Harold V.

Interview of Harold V. Nutt, conducted by Dr. David K. Allison

Date of Interview: 821022

Documentation: 7 Tapes, 2 Diskettes, Transcript 125 pp.

Abstract: Mr. Nutt tells about his background and education, his work in private industry developing greases and lubricating oils, and his interest in aeronautical engineering. He accepted a job at the Engineering Experiment Station in 1938, and speaks of the change during the war years from testing material manufactured by industry to research, testing captured equipment, the post-war reduction in force, and becoming superintendent of the Internal Combustion Laboratory. He also discusses the relationship between EES and BUSHIPS, the Metallurgical Laboratory, experimental submarine engines, early work with titanium, and how the loss of the THRESHER stimulated the development of SDRVs. He speaks of his involvement in VLAP, the

reorganizat ion during the 1960s, and the change in name to Marine Engineering Laboratory, and the consolidation of MEL and NSRDC.

Repositories: DTNSRDC

Individuals mentioned: Joakim, W. F. Argora, Larry
Zumwalt, ADM Elmo
Vincent, CAPT Manuel da Costa
Smith, Clane
Smith, Watt
King, FADM Ernest
Taylor, RADM David W.

Institutions: Marine Engineering Laboratory
Office of Naval Research
Engineering Experiment Station
David Taylor Naval Ship Research and Development Center
Bureau of Ships

Subjects: Fuel
Metallurgy
Bearings
Submarine Propulsion Systems
Lubrication
Titanium

Other added entries: Submarine Snorkels
Vietnam Laboratory Assistance Program
USS THRESHER
Submarine Deep Rescue Vehicles
Ship Storage
Hydrogen Peroxide Engines
Technical Director

O'Neill, William

Date of Interview: 811214

Documentation: 1 Tape, Index

Abstract: This interview centers on the history of hydrofoil development in the Navy. Mr. O'Neill mentions the original mission studies and testing by NELC of the ships PLAINVIEW and HIGH POINT, and the propulsion system and design of the hydrofoil gunboats TUCUMCARI and FLAGSTAFF. He discusses early work by ONR and MIT, the program at DTNSRDC, how it

was funded, and key players at the Center.

Repositories: DTNSRDC

Individuals mentioned: Johnson, Robert Ellsworth, William Buckley, William H. Schab, Henry Kelly, Jim

Institutions: Naval Electronics Laboratory Center
David Taylor Model Basin
Naval Ship Research and Development Center
David Taylor Naval Ship Research and Development Center
Boeing Airplane Company
Office of Naval Research

Subjects: Hydrofoils Hydroelasticity Cavitation Hydrodynamics

Other added entries: Hydrodynamic Research

USS HIGH POINT USS FLAGSTAFF USS TUCUMCARI USS PLAINVIEW

Owen, RADM Thomas B.

Interview of RADM Thomas B. Owen

Date of Interview: 740000

Documentation: 3 Tapes

Interview number: BA-20

Repositories: DTNSRDC

Page, Dr. Robert Morris

Interview with Dr. Robert Morris Page, conducted by Dr. David K. Allison

Date of Interview: 781027

Documentation: 9 Tapes (16 Sides), Transcript 217 pp.

Other interview date: 781026

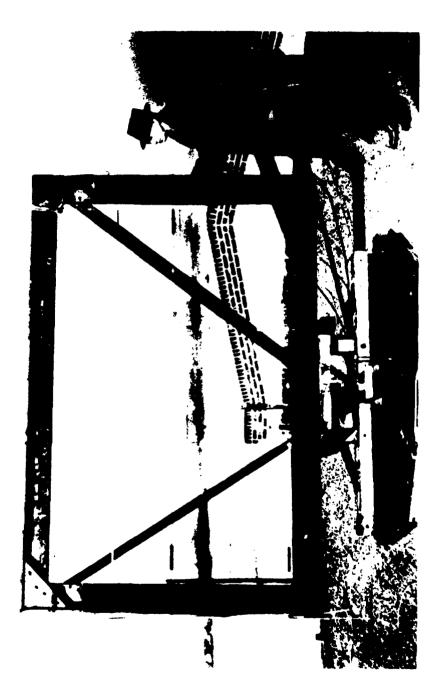
Abstract: Dr. Page discusses his background and education, taking the Civil Service Examination and being offered a job at NRL, work on frequency measurement and the invention of the frequency meter, work on radar from 1930-1934, assignment to radio detection in 1934, pulse radar, the Signal Corps radar project, microwave radar, invention of the radar duplexer, test of equipment on the LEARY, NEW YORK, and TEXAS, the Tizard Mission, airborne radar, British radar development, and opposition to the NDRC Radiation Laboratory. He also talks about the publication of the Ridenour Report, fire control radar, monopulse radar, the effect of ONR on research money, over-the-horizon radar, administrative problems at NRL, patents to NRL employees, his feelings about being Director of Research, reflections on the relationships between civilian scientists and naval officers, Vanguard Project, the Long Range Modernization Program, and his role in bringing ocean sciences to NRL.

Repositories: NRL

Individuals mentioned: Crosley, Al Friedman, Dr. Herbert Hulburt, Dr. Edward O. Bowen, ADM Harold G. Guthrie, Dr. Robert C. Gebhard, Dr. Louis A. Philpott, LaVerne Davis, Tommy Adams, SECNAV Charles F. Taylor, Dr. A. Hoyt Young, Dr. Leo C.

Institutions: Naval Research Laboratory Radio Corporation of America Bureau of Engineering National Defense Research Committee U. S. Army Signal Corps Bureau of Ships

Subjects: Radar Radio Detection Fire Control Radar



Dr. Robert Morris Page with an early radar antenna.

Airborne Radar Microwave Radar

Other added entries: Radar Research USS NEW YORK USS TEXAS USS LEARY Tizard Mission Ridenour Report

Parsons, Harry R.

Interview of Harry R. Parsons, conducted by Albert B. Christman $\ensuremath{\mathsf{B}}$

Date of Interview: 670100

Documentation: Index, Transcript 29 pp.

Interview number: NOTS-75201-S31

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Harry Parsons describes his relationship with his brother, his father's influence on the family, and the family's move West from Chicago to Ft. Sumner, NM. He recalls his father's career, the social life of Ft. Sumner, and RADM Parsons around the time of his death.

Repositories: NWC, DINSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Parsons, Clarissa Parsons, Critchell

Cities: Ft. Sumner, NM.

Pehrson, Gordon

Interview of Gordon Pehrson

Date of Interview: 720200

Documentation: Transcript 66 pp.

Abstract: Mr. Pehrson headed the Plans and Program Division of the Special Projects Office for Polaris. He developed program management concepts, and the Program Evaluation Review Technique (PERT). This is one of a series of seven interviews on concept and development of Polaris program conducted by the U.S. Naval Institute Oral History Program.

Repositories: NHC, NWCM, USNA, USNI

Subjects: Submarine Launched Ballistic Missiles Fleet Ballistic Missiles Ballistic Missile Submarines Nuclear Powered Fleet Ballistic Missile Submarines Nuclear Missiles Weapons Systems

Other added entries: Polaris Program Program Evaluation Review Technique

Peterkin, Ernest W.

Interview of Ernest W. Peterkin, conducted by Dr. David K. Allison

Date of Interview: 810720

Documentation: 1 Tape (2 Sides)

Abstract: Mr. Peterkin discusses the SOLRAD (solar radiation) satellite program. The interview is supplemented by a collection of papers on research management.

Repositories: NRL

Institutions: Naval Research Laboratory

Other added entries: SOLRAD Program

Petersen, ADM Forrest Silas

Interview of ADM Forrest Silas Petersen, conducted by Dr. William J. Armstrong

Date of Interview: 800407

Documentation: 1 Tape

Note: ADM Petersen was COMNAVAIR from 1976-1980

Repositories: NAVAIR

Institutions: Naval Air Systems Command

Plain, Dr. Gilbert

Interview of Dr. Gilbert Plain, conducted by Elizabeth Babcock

Date of Interview: 7512909

Documentation: Index, Transcript 30 pp.

Interview number: S-108

Abstract: Dr. Plain comments on his move from MIT to NOTS and on Dr. Brode, Dr. Sage, and Dr. Warner. He talks about Aircraft Sights work, the start of the Sidewinder Missile Project, and his position as Head of Properties of Matter. Plain describes the NOTS/NWC commanders since 1949 and the various aspects of base operation, including the effect of the Freedom of Information Act, morale problems at NOTS, and Equal Employment Opportunity.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Hunter, Dr. Hugh LaBerge, Dr. Walter

McLean, Dr. William B. Brode, Dr. Wallace C. Sage, Dr. Bruce

Wilson, Dr. Haskell G. Warner, Dr. Arthur H.

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Cities: China Lake, CA.

Polin, Jerry

Interview of Jerry Polin, conducted by Tom Misa and Ed Todd

Date of Interview: 820713

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-9

Abstract: Mr. Polin talks about human factors engineering, his personal background, and his work for Martin Marietta. He comments on his work for the state of Pennsylvania doing statistical highway modeling, his time at Philco-Ford, and his arrival at the Philadelphia Navy Yard as a GS-7 management analyst. Polin discusses the Defense Logistics Agency, the Centrifuge Department at AMRD, and NADC's outside appearance. He describes what it meant to win an NADC fellowship for graduate work at Temple University and his project assignments in human engineering at NADC.

Repositories: NADC, DTNSRDC

Individuals mentioned: Polis, Dr. David

Lazo, John

Institutions: Naval Air Development Center

Martin Marietta

Philadelphia Navy Yard Defense Logistics Agency Philco-Ford Corporation Temple University

Subjects: Sonobuoys Antisubmarine Warfare Antisubmarine Aircraft

Other added entries: Human Factors Engineering

Human Centrifuge
F-14 Project
Light Airborne ASW Vehicle
Light Airborne Multi-Purpose System
A-NEW Program

Polin, Jerry

Interview of Jerry Polin, conducted by Tom Misa and Ed Todd

Date of Interview: 920718

Documentation: 1 Tape, Index, 1 p.

Interview number: NADC-12

Abstract: Mr. Polin discusses the Navy Scientist Training Exchange Program, (NSTEP) which was set up as a NAVMAT function under the DNL in 1978, and relations between NADC and NAVMAT. He describes his assignment at NAVMAT in the laboratories management area and his work with the SHORESTAMPS manpower needs assessment program.

Repositories: NADC, DTNSRDC

Individuals mentioned: Law, Howard

Institutions: Naval Air Development Center

Naval Material Command

Other added entries: Navy Scientist Training Exchange Program

Laboratory Management

Pollak, George

Interview of Mr. George Pollak, conducted by J. D. Gerrard-Gough

Date of Interview: 751024

Documentation: Index, Transcript 8 pp.

Interview number: 5313-S-100

Abstract: Pollak describes his first, short tenure at NOTS, his two years in the Army, and his return to NOTS-Pasadena Annex as a management analyst. He recalls becoming Deputy of Administration at NOTS and the Navy re-organization of 1967. Pollak comments on relations between NOTS-China Lake and Pasadena, the duties of the officer-in-charge, and Douglas Wilcox's role as Deputy for Administration.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Wilcox, Douglas

Institutions: Naval Weapons Center Naval Ordnance Test Station Pasadena Annex

Cities: Pasadena, CA. China Lake, CA.

Pollock, CAPT Thomas

Interview of CAPT Thomas Pollock, conducted by Albert B. Christman ${\bf Pollock}$

Date of Interview: 670500

Documentation: Index, Transcript 41 pp.

Interview number: NOTS-75201-S45

Abstract: CAPT Pollock explains his background in rocket research and the initial work by the Navy and CalTech on forward firing rockets. He discusses rocket testing procedures, the uses of rockets in combat in the Atlantic and the Pacific during World War II, and the results of test conducted at Inyokern and Goldstone Lake. He comments on his crew, the naming of NOTS, and the risks involved in rocket research.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Anderson, Dr. Carl Burroughs, ADM Sherman E. Lauritsen, Dr. Charles C. Renard, RADM Jack C.

Institutions: Naval Ordnance Test Station California Institute of Technology Bureau of Ordnance

Cities: Inyokern, CA. Goldstone Lake, CA.

Subjects: Rocket Research

Pollock, CAPT Thomas

Pollock Review Comments, Vol 2, conducted by Albert B. Christman

Date of Interview: 730730

Documentation: 3 Tapes, Transcript 53 pp.

Interview number: NOTS-75201-S45-A

Abstract: This is a taped review of the first six chapters of <u>The Grand Experiment at Inyokern</u>, Naval History Division, Government Printing Office, Washington, DC., 1978, by Albert B. Christman, and J. D. Gerrard-Gough.

Repositories: NWC, DTNSRDC, NHC

Powers, Kenneth

Interview of Kenneth Powers, conducted by Elizabeth Babcock

Date of Interview: 810518

Documentation: Index. Transcript 34 pp.

Interview number: S-123

Abstract: Mr. Powers comments on his first assignments at NOTS, problems with contractors for the Sidewinder Missile, and relations with the Bureau of Weapons and the Bureau of Ships. He talks about the development of Sidewinder, differences between NOTS and NWC, and his time in Europe working on NATO Sidewinder. Powers describes NOTS/NWC's relationship with Navy people in Washington, the motivations of military decision makers and industry, and the reasons for the success of the Sidewinder Program. He also makes suggestions on improving management of Sidewinder.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Cartwright, Dr. Frank W.
Knemeyer, Franklin H.
LaBerge, Dr. Walter
Smith, Chuck
Wilcox, Dr. Howard A.

Institutions: Naval Ordinance Test Station Naval Weapons Center

Other added entries: Sidewinder Missile Project

Price, D. George

Interview of D. George Price, conducted by Roger Kempler

Date of Interview: 820728

Documentation: Index, Transcript 53 pp.

Abstract: Mr. Price discusses his early background in the Navy Personnel Research Program, World War II and Personnel Research, and postwar establishment of the Personnel Research Division. He describes major figures in NPRDC, his personal philosophy, and the need for NPRDC. Price discusses funding, personnel research activities in San Diego and Washington, and relations between NPRDC and ONR. He also comments on the move toward "centers of excellence" and ADM Elmo Zumwalt.

Repositories: DTNSRDC, NPRDC

Individuals mentioned: McDowell, Perceval E. (Pete)
Herron, RADM Edwin W.
Van Swearingen, CAPT Earl K.
Daley, Dr. John
Zumwalt, ADM Elmo

Institutions: Chief of Naval Material Office of Naval Research Navy Personnel Research and Development Center

Cities: San Diego, CA. Washington, DC.

Other added entries: Personnel Research

Center of Excellence

Probus, Dr. James H.

Interview of Dr. James H. Probus, conducted by Dr. David K. Allison ${\sf N}$

Date of Interview: 830727

Documentation: 3 Tapes, 3 diskettes, Transcript 47 pp.

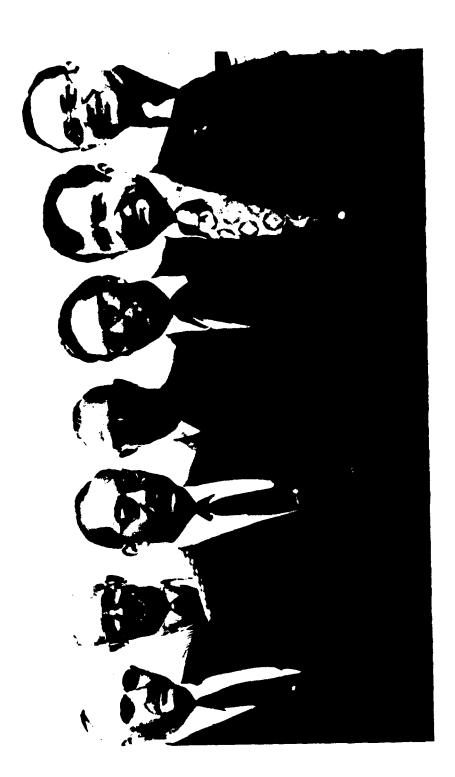
Abstract: Dr. Probus discusses how he became DNL and his impressions of the laboratories on assuming the position, LUS and resulting RIFs, the evolution of the center concept, problems with program oriented funding, implementing the systems approach, the role of COs and TDs in program management, career development for laboratory personnel, the influence of Dr. William McLean, Dr. Chalmers Sherwin, and Robert Morse on the office of the DNL, selection of COs and TDs, the role of the laboratories in the DSARC-DNSARC process, ATOWG, NSAP and the Corporate Plan, the value of the DNL's military deputy, laboratory inspections, and laboratories and the assessment of fleet readiness.

Repositories: DTNSRDC

Individuals mentioned: Berman, Dr. Alan Galantin, ADM Ignatius J. Hillyer, Robert Johnson, Dr. Gerald Keach, CAPT Donald Lawson, Dr. Joel Michaelis, ADM Frederick Parrish, CAPT David Whittle, ADM Alfred J., Jr. Morse, Dr. Robert W.

Institutions: Director of Navy Laboratories
Defense Systems Acquisition Review Council
Systems Commands
Department of the Navy Systems Acquisition Review Council

Other added entries: Navy Industrial Fund Corporate Plan Laboratory Utilization Study Program Management Reduction in Force Advanced Technical Objectives Working Groups Navy Science Assistance Program



Director of Navy Laboratories and staff, circa 1976. Left to right: Captain Williamson, Bud Shull, Theodore S. Huang, Dr. James Probus, Director of Navy Laboratories, Captain Don Walsh, Allen Himes, and Howard Law.

Pryor, CAPT William L.

Interview of CAPT William L. Pryor, conducted by Albert B. Christman

Date of Interview: 780400

Documentation: Tape, Transcript 22 pp.

Interview number: DNL-T14-78

Abstract: CAPT Pryor discusses the establishment of the New London, CT., Laboratory, pre-World War II sonar testing, and conflicts between ADM Bowen and Dr. Vannevar Bush. He talks about the establishment of the San Diego research center, NOSC, the impact on R&D of Dr. Vern Knudson, and specifications for NOSC. Pryor describes how he came to New London, the shift of OSRD work to NRL, and his duty with the Pacific Fleet. He talks about problems at New London upon his return as CO, the need for accountability in R&D, and the failures of the previous CO. Pryor talks about the Navy officer in R&D, including dealing with civilians, officers with technical backgrounds, and the differences between officers of different bureaus. He discusses RADM William S. Parsons and the differences between laboratories.

Repositories: DTNSRDC

Individuals mentioned: Bowen, Dr. Ira S. Bush, Dr. Vannevar Parsons, RADM William S. Knudson, Dr. Vern

Institutions: Naval Research Laboratory
Naval Ocean Systems Center
Office of Scientific Research and Development

Pryor, CAPT William L.

Interview of CAPT William L. Pryor, conducted by Albert B. Christman

Date of Interview: 810626

Documentation: 2 Tapes, Transcript 56 pp.

Interview number: DNL-T37

Abstract: CAPT Pryor discusses his work in sonar, radio, and submarine research. He talks about his fleet duty, both in submarines and aboard the USS WEST VIRGINIA. Pryor describes

his tenure at NRL and as Head of NUSL/New London.

Repositories: DTNSRDC

Individuals mentioned: Rickover, ADM Hyman

Institutions: Naval Underwater Sound Laboratory

Naval Research Laboratory

Subjects: Sonar

Radio

Submarines

Purcell, D.

Interview of D. Purcell, conducted by David H. Devorkin

Date of interview: 820329

Documentation: Tapes, Transcript, 85 pp.

Repositories: NASM

Subject: Astronomy

Quarles, Gilford G.

Interview of Gilford G. Quarles, conducted by Nelson

Wood

Date of Interview: 780424

Documentation: Tapes, Transcript

Abstract: Mr. Quarles, a former director of the Ordnance

Research Laboratory, speaks of his work there.

Repositories: ARL

Institutions: Ordnance Research Laboratory

Pennsylvania State University

Subjects: Torpedos

Other added entries: Acoustics Research

Raborn, VADM William F., Jr.

Interview of VADM William F. Raborn, Jr.

Date of Interview: 720900

Documentation: Transcript 71 pp.

Abstract: VADM Rayborn served as the Director of the Special Projects Division to develop Polaris. This is one of a series of seven interviews on concept and development of the Polaris program conducted by the U.S. Naval Institute Oral History Program.

Repositories: NHC, NWCM, USNA, USNI

Subjects: Submarine Launched Ballistic Missiles Fleet Ballistic Missiles Ballistic Missile Submarines Nuclear Powered Fleet Ballistic Missile Submarines Nuclear Missiles Weapons Systems

Other added entries: Polaris Program

Ramras, Eugene M.

Interview of Eugene M. Ramras, conducted by Albert B.

Date of Interview: 780309

Documentation: 1 Tape, Transcript 16 pp.

Interview number: DNL-T4-78

Abstract: Mr. Ramras discusses the evolution of NPRDC from several field activities. He describes how a particular project works, military interfaces with NPRDC, and the impact of computers on people. Ramras explains that the Navy's main problems of the 1970's are in personnel management and comments on laboratory consolidation, significant breakthroughs, and the future of the laboratory system.

Repositories: NHC, DTNSRDC

Individuals mentioned: Frosch, Dr. Robert A.

Probus, Dr. James H.

Institutions: Navy Personnel Research and Development Center Navy Personnel and Training Research Center

Other added entries: Personnel Management

Personnel Research

Ramsey, Dr. Norman

Interview of Dr. Norman F. Ramsey

Date of Interview: 600000

Documentation: Index, Transcript 358 pp.

Abstract: Dr. Ramsey talks about his education, research with Isidor Rabi, and Enrico Fermi, the NDRC Radiation Laboratory, MIT, the development of radar, and the Manhattan Project. He speaks of work at Los Alamos, and discussions on use of the atomic bomb and possible targets, the Trinity test, and estimates of the damage at Hiroshima.

Repositories: COL

Individuals mentioned: Oppenheimer, Dr. Robert

Fermi, Enrico Rabi, Isidor I.

Institutions: National Defense Research Committee

Radiation Laboratory

Subjects: Radar

Cities: Los Alamos, NM.

Tinian

Hiroshima, Japan

Other added entries: Manhattan Project

Trinity Test

Raney, Dr. William

Interview of Dr. William P. Raney, conducted by Dr. Vincent Ponko

Date of Interview: 801125

Documentation: 3 Tapes, Index, Transcript 47 pp.

Interview number: DNL-T31

Abstract: Dr. Raney discusses the role of the National Research Council of the National Academy of Science in

military R&D and his early years as Special Assistant to the Assistant Secretary of the Navy (R&D). This includes contacts with Dr. Chalmers Sherwin, lack of support for the Sherwin Plan, and the role of the DNL in dealing with the Sherwin Plan. Raney describes the beginnings of the DNL/DLP and its first heads, Dr. Gerald Johnson and Dr. Joel Lawson. He comments on exploratory development in Navy R&D, the systems approach to lab operations, and the role of management studies under SECDEF McNamara. Raney assesses Dr. Robert A. Frosch as ASN (R&D), his work in ONR, and talks about Thomas Amlie as Technical Director of NWC.

Repositories: DTNSRDC

Individuals mentioned: Foster, Dr. John S.
Frosch, Dr. Robert A.
McNamara, SECDEF Robert S.
Johnson, Dr. Gerald
Sherwin, Dr. Chalmers
Lawson, Dr. Joel
Amlie, Dr. Thomas S.

Institutions: Chief of Naval Operations
Director of Navy Laboratories
Office of Naval Research
National Academy of Science
Director of Laboratory Programs
Naval Weapons Center
National Science Foundation

Other added entries: Sherwin Plan

Rees, Mina

Interview of Mina Rees

Date of Interview: 840100

Documentation: 8 Tapes

Abstract: This interview is part of the "Women in the Federal Government Project", sponsored by the Arthur and Elizabeth Schlesinger Library on the History of Women in America and funded by the National Endowment for the Humanities. Ms. Rees describes her career with the Navy.

Repositories: RAD

Institutions: Office of Naval Research

Regan, Dr. James J.

Interview of Dr. James J. Regan, conducted by Roger Kempler

Date of interview: 820716

Other interview date: 821117

Documentation: Transcript, 49 pp.

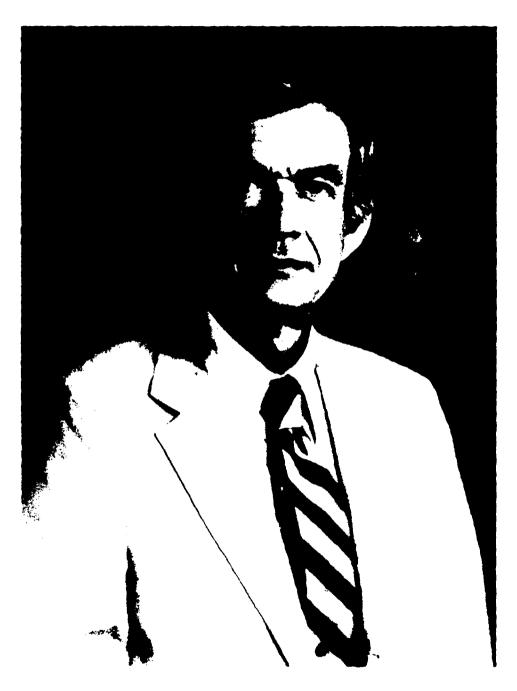
Abstract: Dr. Regan describes becoming NPRDC's first Technical Director, the special problems of the first year of operation, difficulties associated with full consolidation of the Navy's personnel R&D efforts and responsibility for coordinating all personnel research, the origin of the Center concept, NRAC's impact on Center development, the Sub-Panel on Personnel, and location of NRAC records, funding of NPRDC, his Center management philosophy, the appropriateness of a civilian Technical Director managing a military laboratory, becoming a NAVMAT laboratory, the differences in operational philosophy between NPRDC and the material laboratories, his concerns relative to changing modes in R&D funding, reports by the Inspector General and GAO, and an overview of the last ten years.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Rigney, Dr. Joseph Kinnear, RADM George E. R. Bagley, VADM David H. Collins, Dr. John J. Probus, Dr. James H. Ramras, Eugene M. Bryan, Dr. Glenn L. Frosch, Dr. Robert A. Smith, Dr. Robert

Institutions: Naval Research Advisory Committee General Accounting Office Navy Personnel Research and Development Center

Other added entries: Technical Director Personnel Research



Dr. James J. Regan, Technical Director of the Navy Personnel Research and Development Center, 1974-1981.

Reich, VADM Eli T.

Date of Interview: 750210

Documentation: 1 Tape

Interview number: BA-23

Repositories: NHC, DTNSRDC

Reich, VADM Eli T.

Interview of VADM Eli T. Reich, Volume I

Date of Interview: 780400

Other date of interview: 790100

Documentation: Index, Transcript 520 pp.

Abstract: VADM Reich discusses his submarine experience in World War II, command of the missile cruiser USS CANBERRA, and his role in the investigative study of the Tartar, Terrier and Talos missile programs.

Repositories: NHC, USNA, USNI, NWCM

Subjects: Surface to Air Missiles

Antiaircraft Missiles

Weapons Systems

Other added entries: Terrier Missile

Tartar Missile Talos Missile

Surface Missile Systems Project

Reich, VADM Eli T.

Interview of VADM Eli T. Reich, Volume II

Date of Interview: 790200

Other date of interview: 800100

Documentation: Index, Appendices, Transcript 681 pp.

Abstract: Continues career in 1963, when VADM ich was Director of the Surface Missile Systems Project. Prior to his retirement, he served as Deputy Assistant Secretary of

Defense (Production, Engineering, and Acquisition).

Repositories: NHC, USNA, USNI, NWCM

Subjects: Surface to Air Missiles Antiaircraft Missiles Weapons Systems

Other added entries: Terrier Missile Tartar Missile

Talos Missile Surface Missile Systems Project

Renard, RADM Jack C.

Interview of RADM Jack C. Renard, conducted by Albert B. Christman ${\bf B}$

Date of Interview: 690521

Documentation: Index, Transcript 52 pp.

Interview number: NOTS-75201-S64

Abstract: RADM Renard comments on his position as Magnetic Airborne Director at NOTS, test facilities at Goldstone Lake, and the search for a new rocket test sight. He talks about acquiring land for a new test facility, the turn of events that led to it, and CalTech's participation in the war effort under Dr. Charles Lauritsen. Renard describes RADM Mitscher's influence, the first rocket tests, and the opening of NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E. Fowler, Dr. William Hayward, ADM John T. King, FADM Ernest Lauritsen, Dr. Charles C. Mitscher, ADM Marc Pollock, CAPT Thomas Russell, ADM James S.

Institutions: Naval Ordnance Test Station California Institute of Technology Ryan Aircraft

Subjects: Naval Research Rocket Research

Cities: Goldstone Lake, CA. Inyokern, CA.

Renne, Clarence J.

Interview of Clarence J. Renne, conducted by Michelle Kilikauskas and Susan Priest

Date of Interview: 801219

Documentation: Index, Transcript 30 pp.

Interview number: S-114

Abstract: Renne discusses his early career, relationships between blue and white collar employees at NOTS, and the employee services board there. He comments on the difficulty in firing poor employees, difficulty getting work done, and his management philosophy. Renne talks about who really got work done at NOTS/NWC, Dr. Haskell G. Wilson, and contracting work to outside companies. He also speaks on the importance of trusting government workers.

Repositories: NWC, NHC, DTNSRDC

Individuals mentioned: Hays, Burrell

Printy, Rich

Wilson, Dr. Haskell G.

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Rexroth, John

Interview of Mr. John Rexroth, conducted by Dr. Vincent Ponko

Date of Interview: 801205

Documentation: 3 Tapes, Index, Transcript 46 pp.

Interview number: DNL-T33

Abstract: Mr. Rexroth discusses his work as a project officer in the Bureau of Ordnance, including fire control, liaison officer with contractors, target designation work, and the Research and Development Board. He talks about support for applied research, in particular, the work of Dr. Frank Tanczoz, the adverse influence of Polaris and other

projects, and the establishment of ASN (R&D). Rexroth comments on the Bureau of Weapins, his tenure as TD there, his contact with the Applied Physics Labs, and relations with in-house labs. He also discusses the negative impact of releasing the labs from the Bureaus/SYSCOMs, the lack of benefit derived from CNM control of the labs, and project management in the Systems Commands. Rexroth states that labs should only handle technical management responsibility, private industry should remain part of the R&D picture, and evaluates Dr. Robert A. Frosch and Dr. William Raney as R&D leaders. He explains the impact SECDEF Robert S. McNamara had on R&D procedures, the role of the CNO in Naval R&D, and the problems the Navy faced in the mid-1970's.

Repositories: DTNSRDC

Individuals mentioned: Parham, CAPT John S.
Tanczoz, Dr. Frank I.
Wilson, Dr. Haskell G.
Raney, Dr. William
Frosch, Dr. Robert A.
McNamara, SECDEF Robert S.

Institutions: Bureau of Ordnance Bureau of Weapons Chief of Naval Material Chief of Naval Operations Director of Navy Laboratories Applied Physics Laboratory Systems Commands

Other added entries: Technical Director Polaris Program

Rich, Harry L.

Interview of Harry L. Rich, conducted by Dr. David K. Allison

Date of Interview: 840514

Documentation: 3 Tapes, Index

Abstract: Mr. Rich reminisces about his thirty-three years at DTNSRDC, he mentions his initial interview with Dr. Lyman Hewins and CAPT Alvey Wright, and his job as sciencific assistant at the Experimental Model Basin. Rich was more interested in Structures and was able to transfer to that Department in 1941. He discusses the development of strain gauges, different ty, es of hull strength testing, his memories of Operation Crossroads and how DTMB simulated the

tests. He describes conditions at DTMB during World War II the Marine guard force living in the Structural Mechanics
Laboratory, and unusual tests with cadavers. He mentions the
role of the Center in the full scale shock test of the
THRESHER, involvement in testing the "3 T" missile systems,
improvements in submarines and surface ships due to research
in shock and vibration studies, his position as the Navy's
Shock Coordinator, and his work as an NSAP advisor to the
Korean Navy.

Repositories: DTNSRDC

Individuals mentioned: Johnson, Everatt Emmil
Hewins, Dr. Lyman
Hartmann, Dr. Gregory
Keil, Dr. Alfred H.
Kell, ADM Claude O.
Saunders, CAPT Harold E.
Windenburg, Dr. Dwight F.
Crook, Mary Charlotte
Heller, CDR S. K.
Allen, Dr. Robert
Lawson, Dr. Joel

Institutions: Navy Science Assistance Program
David Taylor Naval Ship Research and Development Center
Naval Ship Research and Development Center
David Taylor Model Basin
Structures Department
Applied Mechanics Laboratory
Bureau of Ordnance
Bureau of Ships
Structural Mechanics Department
Shock and Vibration Centralization Activity

Subjects: Shock Vibration

Other added entries: Korean War

Strain Gauges
Shock Testing
Shock Hardening
Navy Industrial Fund
Polaris
USS TROUT
Terrier Missile
Operation Paperclip
Talos Missile
Tartar Missile
USS THRESHER
USS DRAGONET
USS BOSTON
USS OMAHA

Manhattan Project Operation Crossroads

Richmond, CDR John

Interview of CDR John Richmond, conducted by Albert B. Christman ${\bf B}$

Date of Interview: 670100

Documentation: Index, Transcript 125 pp.

Interview number: NOTS-75201-S33

Abstract: CDR Richmond reminisces about the construction and expansion of NOTS during the two years he was in charge. He discusses the birth of the community at China Lake, CA. and the construction of permanent housing, schools, and recreational facilities. Richmond sketches the personalities of NOTS there during his time and describes the military function of the base.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Appleton, Robert
Blandy, ADM George
Byrnes, CAPT James
Duncan, CAPT James
Hayward, ADM John T.
Hussey, VADM George F.
Lauritsen, Dr. Charles C.
Sage, Dr. Bruce
Sandquist, CAPT Oscar
Switzer, VADM W. G.
Sykes, RADM James B.
Thompson, Dr. Louis T. E.
Zimmerman, LT

Institutions: Naval Ordnance Test Station

Cities: China Lake, CA.

Other added entries: Manhattan Project

Commanding Officer

Ricketts, COMO Myron V.

Interview of COMO Myron V. Ricketts, conducted by Dr. David K. Allison $% \left\{ 1,2,\ldots ,2,3,\ldots \right\} =0$

Date of Interview: 820210

Documentation: 1 Tape, Transcript 22 pp.

Abstract: COMO Ricketts comments on the role of a military commanding officer in the Navy laboratories, his work at NRL, the establishment of the Fleet Support Office at DTNSRDC, NSAP, financial management at DTNSRDC, the relationship between the laboratories and Systems Commands, contacting out of commercial activities, and incentives to keep competent technical people in the laboratories.

Repositories: DTNSRDC

Institutions: Fleet Support Office Naval Research Laboratory David Taylor Naval Ship Research and Development Center Navy Science Assistance Program

Other added entries: Commercial Activities Navy Industrial Fund Contracting

Roach, James

Date of Interview: 750203

Documentation: 1 Tape

Interview number: BA-27

Repositories: NHC, DTNSRDC

Robinson, ADM Samuel M.

Interview of ADM Samuel M. Robinson

Date of Interview: 630000

Documentation: Transcript 56 pp.

Abstract: ADM Robinson recalls his career in Naval engineering, discussing electric ship propulsion, the development of the high speed diesel engine, his service at the Puget Sound Navy Yard, and as Chief of the Bureaus of Engineering and Ships.

Repositories: COL, NHC

Institutions: Bureau of Ships Bureau of Engineering

Subjects: Diesel Engines Electric Ship Propulsion Naval Engineering

Roman, Nancy Grace

Interview of Nancy Grace Roman, conducted by Dr. Richard F. Hirsh

Date of interview: 7606300

Documentation: Tape, 1 hr.

Repositories: AIP

Subjects: Astronomy

Roman, Nancy Grace

Interview of Nancy Grace Roman, conducted by Dr. David DeVorkin

Date of interview: 8008019

Documentation: Tapes, 4 hrs., Transcript 70 pp.

e again the

Abstract: Ms. Roman speaks mainly about her career with NASA and the astronomy and space astronomy programs there, she also discusses her early life, education, and positions at the Yerkes Observatory and the Naval Research Laboratory.

Repositories: AIP

Institutions: Naval Research Laboratory

National Aeronautics and Space Administration

Yerkes Observatory

Subjects: Astronomy Space Astronomy

Rosen, Milton

Interview of Milton Rosen, conducted by Dr. David H. DeVorkin

Date of Interview: 830325

Documentation: Tapes, 3.5 hours, Transcript, 90 pp.

Abstract: This interview covers Mr. Rosen's education, employment at Westinghouse and the Federal Power Commission, and move to NRL in 1940. At NRL Rosen was involved in general atmospheric research, including the Rocket-Sonde Division, the V-2 rocket program, and his year at JPL. He describes the V-2 rocket and later programs, and discusses basic versus applied research at NRL.

Repositories: NASM

Individuals mentioned: Braun, Wernher von

Tombaugh, Clyde McLaughlin, R. B. Krause, Dr. Ernst H.

Institutions: Naval Research Laboratory Jet Propulsion Laboratory University of Pennsylvania

Westinghouse Corporation Federal Power Commission

Subjects: Radar Rocketry

Cities: White Sands, NM.

Other added entries: V-2 Rocket

Viking Rocket Aerobee Rocket Rocket-Sonde Missile Research Redstone Rocket Convair Rocket

Atmospheric Research

Roy, Dr. Max

Interview of Dr. Max Roy, conducted by Albert B. Christman

Date of Interview: 670100

Decumentation: Index, Transcript 10 pp.

Interview number: NOTS-75201-S25

Abstract: Dr. Roy speaks about the establishment of the Salt Wells Pilot Plant and the types of bombs made there. He discusses the established of the atom bomb plant at Inyokern, CA., and the different components made at Inyokern and Albuquerque, NM. Roy also tells why SWPP was closed.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Institutions: Naval Ordnance Test Station

Salt Wells Pilot Plant

Cities: Inyokern, CA. Albuquerque, NM. Los Alamos, NM.

Ruckner, RADM Edward A.

Interview of RADM Edward A. Ruckner

Date of Interview: 731000

Other interview date: 750500

Documentation: Index, Transcript 571 pp.

Abstract: RADM Ruckner discusses his education at the Naval Postgraduate School and MIT, his work on radar with ADM Rivero, and his tenure as Deputy CNO for Development. He also describes his tours of duty on the Ships Characteristics Board, and as Ordnance Officer at the Naval Proving Ground.

Repositories: NHC, USNA, USNI, NWCM

Individuals mentioned: Rivero, ADM Horacio

Institutions: Massachusetts Institute of Technology Deputy Chief of Naval Operations (Development) Bureau of Ordnance Naval Proving Ground Ship Characteristics Board Naval Postgraduate School

Subjects: Ordnance

Radar

Cities: Annapolis, MD.

Dahlgren, VA.

Ruckner, RADM Edward A.

Interview of RADM Edward A. Ruckner, conducted by Peter Bruton and an unknown interviewer

Date of Interview: 740900

Documentation: 3 Tapes, Index, Transcript 87 pp.

Interview number: BA-6

Abstract: RADM Ruckner discusses Bureau of Ordnance R&D objectives, differences between BUORD's operation and those of other bureaus, and technical direction in BUORD labs. He explains the BuOrd lab evaluation process, how contractors were selected, and how ordnance was inspected. Ruckner describes trends and issues in BUORD from 1940 to 1948 and his tenure as Asst. Chief for R&D-BUORD. He talks about how R&D money was obtained, BuOrd's relations with ONR, and the establishment of the ASN (R&D). Ruckner also mentions BUORD's relations with OPNAV, DCNO, and ASN (R&D) and relates how DCNO (Development) was created and what its functions are. Lastly, he also discusses major trends and issues in R&D from 1958 to 1973, including important program successes, expansion of the DDR&E staff, and the centralization of Navy labs into the Centers.

Repositories: NHC, DTNSRDC

Individuals mentioned: Bennett, RADM Rawson Foster, Dr. John S. Frosch, Dr. Robert A. McNamara, SECDEF Robert S. Wakelin, Dr. James H.

Institutions: Assistant Secretary of the Navy (R&D)

Chief of Naval Material
Deputy Chief of Naval Operations (Development)
Office of Naval Research
Bureau of Ordnance
Director of Defense Research and Engineering

Russell, ADM James S.

Interview of ADM James S. Russell, conducted by Albert B. Christman ${\tt Christman}$

Date of Interview: 700500

Documentation: Index, Transcript 17 pp.

Interview number: NWC-75201-71

Abstract: ADM Russell first details his own background at CalTech and the Bureau of Aeronautics. He discusses Dr. Theodore von Karman and how - with the help of Andrew Haley - he began to manufacture things for the Army. Russell also comments on the relationship between BUAER and BUORD. That includes the influence of ADM McCain in Navy R&D and the battle over cognizance at NOTS/NWC.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E. Haley, Andrew McCain, ADM John S. Karman, Dr. Theodore von

Institutions: California Institute of Technology Bureau of Aeronautics Bureau of Ordnance North Atlantic Treaty Organization

Other added entries: Rocket Engines

Sagdahl, John

Interview of John Sagdahl, conducted by Nelson Wood

Date of Interview: 7705211

Documentation: Tapes, Transcript

Abstract: Mr. Sagdahl speaks of his work as general foreman

for the Mark 43 Torpedo.

Repositories: ARL

Subjects: Torpedos

Other added entries: Torpedo Mark 43 Aircraf: Launched Torpedos

Sage, Dr. Bruce

Interview of Dr. Bruce Sage, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 661100

Documentation: Index, Transcript 30 pp.

Interview number: NOTS-75201-S22

Abstract: Dr. Sage discusses the selection of NOTS sites for pilot plant operations, the construction of the Salt Wells and China Lake Pilot Plants. He talks about the Michelson Laboratory at China Lake, the land selection for the plants, and Dr. Charles C. Lauritsen's motivations.

 $\textbf{Repositories:} \ \mathtt{DTNSRDC} \ \textbf{,} \ \ \mathtt{NWC} \ \textbf{,} \ \ \mathtt{NHC}$

Individuals mentioned: Byrnes, CAPT James Lauritsen, Dr. Charles C. Parsons, RADM William S. Sabin, Palmer

Institutions: Salt Wells Pilot Plant
China Lake Pilot Plant
Michelson Laboratory

Cities: Inyokern, CA. Pasadena, CA.

Sanderson, Dr. John A.

Interview of Dr. John A. Sanderson, conducted by Dr. David K. Allison

Date of Interview: 770831

Documentation: 3 Tapes (5 Sides), Index 4 pp.

Abstract: This interview is a supplement to the oral history interview with Dr. Edward O. Hulburt and talks about Hulbert's associates.

Repositories: NRL

Individuals mentioned: Hulburt, Dr. Edward O.

Institutions: Naval Research Laboratory

Subjects: Optics

Sandquist, CAPT Oscar

Interview of CAPT Oscar Sandquisc, conducted by Albert B. Christman

Date of Interview: 660706

Documentation: Index, Transcript 26 pp.

Interview number: NOTS-75201-S13

Abstract: CAPT Sandquist tells about the birth of NOTS in Inyokern, CA., the recruitment of labor, and contractors at NOTS. He describes the logistics of construction, and at the same time cooperating with the CalTech scientists on the missile ranges nearby. Next, he discusses the master plan of the site, water problems, labor problems, budgets, postwar plans and construction. Sandquist also reflects on the first weapons systems to come out of NOTS, including the Sidewinder missile.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E. Michelson, Dr. Albert A. Byrnes, CAPT James

Institutions: Naval Ordnance Test Station California Institute of Technology

Other added entries: Sidewinder Missile Project

Sawyer, Dr. Ralph A.

Interview of Dr. Ralph A. Sawyer, conducted by Albert B. Christman

Date of Interview: 670500

Documentation: Index, Transcript 55 pp.

Interview number: NOTS-75201-S46

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons and also partly to record the history of NOTS at Inyokern, CA. Dr. Sawyer discusses his work at the Armor and Projectile Laboratory at the Naval Proving Ground at Dahlgren, VA., his relations with CAPT Hedrick, the CO there, and his impressions of Parsons. He describes subsequent promotion to Head of Research at NOTS, his work on Crossroads, and other research at NOTS. He evaluates Parsons as a man and as an officer and comments on Dr. Louis T. E. Thompson.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Blandy, ADM George
Bradbury, Dr. Norris E.
Hedrick, CAPT David
Loeb, Dr. Leonard
Parsons, RADM William S.
Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station
Armor and Projectile Laboratory
Naval Proving Ground

Cities: Inyokern, CA. Dahlgren, VA.

Other added entries: Operation Crossroads

Sawyer, Dr. Ralph A.

"Development of the Armor and Projectile Laboratory: Dr. Ralph A. Sawyer", conducted by Jack Brooks, Jr.

Date of Interview: 740522

Documentation: Transcript 7 pp.

Note: This interview is the Chapter V of Dahlgren, edited by

Kenneth G. McCollum

Abstract: Dr. Sawyer tells how he came to Dahlgren as a Naval Officer to do spectrographic analysis at the newly constructed Armor and Projectile Laboratory, mentions his co-workers, Dr. L. T. E. Thompson and CAPT Leonard Loeb, the size of his staff, the most significant achievements of the A&P Laboratory, his latter work on the Manhattan Project.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Thompson, Dr. Louis T. E.

Loeb, Dr. Leonard

Institutions: Naval Proving Ground Armor and Projectile Laboratory

Subjects: Ordnance

Schneider, RADM R. J.

Interiew of RADM R. J. Schneider

Date of Interview: 750107

Documentation: 2 Tapes

Interview number: BA-18

Repositories: DTNSRDC

Schoeffel, RADM Malcom F.

Interview of RADM Malcom Schoeffel, conducted by Albert B. Christman

Date of Interview: 660421

Documentation: Index, Transcript 11 pp.

Interview number: NOTS-75201-S8

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. RADM Schoeffel reflects on NOTS and the Michelson laboratory. He comments on RADM Parsons as Deputy Chief of Bureau of Ordnance.

Repositories: MWC, DTNSRDC, NHC

Individuals mentioned: Hussey, VADM George F. Parsons, RADM William S. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station Michelson Laboratory

Cities: Inyokern, CA.

Schoenherr, Dr. Karl E.

Interview of Dr. Karl E. Schoenherr, conducted by Dr. David K. Allison

Date of Interview: 820415

Documentation: 8 Tapes, 5 Diskettes, Transcript 153 pp.

Abstract: Dr. Schoenherr talks about his background and education, serving as an apprentice seaman, entering MIT to study naval architecture, and his first experience with the Experimental Model Basin - testing yacht models for a school project. He discusses the EMB in 1922, his coworkers, the carriage, the size and type of staff, RADM David Taylor, the relationship between EMB and the Bureau of Construction and Repair, testing procedures, and the inadequacy of the EMB. He mentions the importance of the development of the bulbous bow and Taylor's Standard Series, cavitation studies in the 1930s, the search for a new basin site, acoustic decoys for World War II German torpedos, torpedo and submarine research and development during World War II, the wind tunnel, and the influence of airship design on on torpedos. He gives his



Dr. Karl E. Schoenherr (left) and Mr. Krebs at the controls of the model towing carriage of the Experimental Model Basin, late 1920s.

impressions of CAPT Saunders and CMDR Wright, NSRDCs relations with BUSHIPS, post-war changes in organization, speaks of leaving the Center to become Dean of Engineering at Notre Dame, returning to the Model Basin in 1958, work on underwater acoustics, and the balance between testing and research.

Repositories: DTNSRDC

Individuals mentioned: Hewins, Dr. Lyman Rickover, ADM Hyman Keil, Dr. Alfred H. St. Denis, Manley Karman, Dr. Theodore von Gertler, Morton Wright, RADM Edward Alvey Landweber, Dr. Louis Saunders, CAPT Harold E. Eggert, CAPT Ernest F. McEntee, CAPT William Taylor, RADM David W. Sam, Dr. Albert

Institutions: Massachusetts Institute of Technology Notre Dame Bureau of Construction and Repair Bureau of Ships Johns Hopkins University Experimental Model Basin

Subjects: Airships Propellers Torpedos

Other added entries: Naval Architecture Mine Mark 24 Bulbous Bow Model Testing

Schoman, Dr. Charles M.

Interview of Dr. Charles M. Schoman, conducted by Dr. David K. Allison

Date of Interview: 820726

Documentation: 1 Tape, Index

Abstract: Dr. Schoman describes the organizational structure of DTNSRDC, his position as Director of Plans & Programs, the Five Year Planning process, and the work of Center

committees.

Repositories: DTNSRDC

Individuals mentioned: Powell, Dr. Alan

Allen, Dr. Robert C.

Institutions: David Taylor Naval Ship Research and Development Center

Director, Plans & Programs
Director of Technology
Technical Director

Other added entries: Five Year Plan

Laboratory Management

Sette, Dr. William J.

Interview of Dr. William J. Sette, conducted by Dr. David K. Allison

Date of Interview: 821015

Documentation: 1 Tape, Index

Abstract: Dr. Sette talks about his background, initial impression of the Experimental Model Basin, early work on shock testing and propeller cavitation, involvement of the Basin in World War II operations, airblast and gunblast effects, Operation Crossroads, and his view of the Carderock - Annapolis Laboratory merger.

Repositories: DTNSRDC

Individuals mentioned: Mumma, RADM Albert G.
Windenburg, Dr. Dwight F.
Strasberg, Dr. Murray
Keil, Dr. Alfred H.

Institutions: Experimental Model Basin
David Taylor Model Basin
Marine Engineering Laboratory
David Taylor Naval Ship Research and Development Center
Underwater Explosives Research Division
Applied Mechanics Laboratory
Hydrodynamics Division

Subjects: Shock Cavitation

Cities: Los Alamos, NM. Woods Hole, MA.

Other added entries: Operation Crossroads

Independent Research/Independent Exploratory Development Gunblast

Sewell, Robert G. S.

Interview of Robert G. S. Sewell, conducted by Mickey Strang

Date of Interview: 751200

Documentation: Index, Transcript 27 pp.

Interview number: S-105

Abstract: Mr. Sewell comments on the Vietnam Laboratory Assistance Program - how men were selected to go, how they travelled to Vietnam with lab equipment, and technical support from NOTS. He discusses being a civilian in uniform, life in the Navy at sea and in Saigon, and cutting military red tape. Sewell also talks about the Sidewinder and Walleye Missile Projects.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Gould, Al

Johnson, Dr. Gerald

Institutions: Naval Ordnance Test Station

Other added entries: Vietnam Laboratory Assistance Program

Sidewinder Missile Project Walleye Missile Project

Vietnam War

Sewell, Robert G. S.

Interview of Robert G. S. Sewell, conducted by Mickey Strang

Date of Int Viview: 750826

Documentation: Index, Not Transcribed, but in note form.

Interview number: S-106

Abstract: Mr. Sewell explains why he came to NOTS-China Lake, why testing there is more expensive than other labs.

He comments on the role of William B. McLean at NOTS and an engineer's pursuit of excellence - he cannot stand to be wrong. Sewell talks about changes in NOTS organization and Junior Professional Training, as well as the initial team recruited for NOTS. He noted that by 1950, NOTS original projects had been completed and the lab had to find new things to do.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B.

Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Cities: China Lake, CA.

Seymour, VADM Ernest R.

Interview of VADM Ernest R. Seymour, conducted by Leroy L. Doig III and Dr. David K. Allison

Date of Interview: 830612

Documentation: Tapes, Transcript, 36 pp.

Interview number: S-149

Abstract: VADM Seymour was COMNAVAIR from 1980-1983. Discussion includes concept and place of the laboratories, contractors versus laboratories, organization, NAVMAT versus NAVAIR activities, military-civilian relationships, projects - including Maverick and Skipper; uses NWC as example of good and bad in laboratories.

Repositories: NWC

Institutions: Naval Weapons Center

Naval Material Command Naval Air Systems Command

Other added entries: Laboratory Management

Maverick Missile

Seymour, VADM Ernest R.

Interview of VADM Ernest R. Seymour, conducted by Dr. William J. Armstrong

Date of Interview: 830713

Documentation: 1 Tape

Note: VADM Seymour was COMNAVAIR from 1980-1983.

Repositories: NAVAIR

Institutions: Naval Air Systems Command

Seymour, Dr. Harry R.

Interview of Dr. Harry R. Seymour, conducted by Roger Kempler

Date of Interview: 820629

Other interview date: 820818

Documentation: Transcript, 27 pp

Abstract: Dr. Seymour describes his perception of NRAC, the establishment of NPRDC, the relative merits of BUPERS and NAVMAT sponsorship, the changing role of NPRDC's Washington representative, its major accomplishments, the influence of his military service on his decision to enter personnel research, the Special Projects Units, personnel research programs of the 1950s, the general attitude of the Navy toward personnel research, major figures in research during the post-war era, and his thoughts on improving management of Naval R&D. He talks of his major goals as NPRDC's Washington liaison officer, basic versus applied research, problems associated with justifying personnel R&D in relation to hardware R&D, the relative impact of personnel R&D in the fleet today, the NRAC sub-panel's concern over the amount of applied research performed by NPRDC, his views on the GAO review, and NPRDC's size as a key to its effectiveness

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Price, D. George Watkins, ADM James Clarkin, CAPT James J. Wiskoff, Dr. Martin Carstater, Dr. Eugene D.

Sjoholm, Dr. Allan A.
Regan, Dr. James J.
Parker, CAPT Donald F.
Collins, Dr. John J.
Marcy, ASN (R&D) H. Tyler
Rostker, Dr. Bernard
Elster, Dr. Richard
Bryan, Dr. Glenn L.

Institutions: Naval Research Advisory Committee
Navy Personnel Research and Development Center

Subjects: Personnel Research

Sheehy, Myles

Interview of Myles Sheehy, conducted by Albert B. Christman

Date of Interview: 780300

Documentation: 1 Tape, Transcript 12 pp.

Interview number: DNL-T7-78

Abstract: Mr. Sheehy describes his years at NEL in San Diego, in particular, his role during World War II. Note: The transcription of this interview is poor. Key terms are repeatedly omitted either purposefully of because poor tape quality. There is no page 11.

Repositories: DTNSRDC

Institutions: Naval Electronics Laboratory

Sherwin, Dr. Chalmers

Interview of Dr. Chalmers Sherwin, conducted by Dr. Samuel Rothman ${\bf r}$

Date of Interview: 740000

Documentation: Index, Transcript 30 pp.

Interview number: BA-3-74

Abstract: Dr. Sherwin talks about the original purpose of DDR&E, funding for labs, and the dissatisfaction that led to lab re-organization. He comments on the image on Navy labs,

the reason for the McNamara memo concerning lab reorganization, and and new innovations in technology. He also discusses the management of the labs, basic research done by labs, DDR&E, and centralization in DoD. Sherwin sees the need for a Historical Evaluation Group to continually evaluate technical and management decisions.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Glass, Dr. Edward

McLean, Dr. William B. McNamara, SECDEF Robert S.

Institutions: Director of Defense Research and Engineering

Other added entries: Laboratory Consolidations

Laboratory Management

Shugg, Carleton

Interview of Carleton Shugg

Date of Interview: 731100

Documentation: Transcript 25 pp.

Abstract: Mr. Shugg was President of Electric Boat Company, a sub-systems contractor and builder of FBM submarines for Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U. S. Naval Institute Oral History Program.

Repositories: NHC, NWCM, USNA, USNI

Subjects: Submarine Launched Ballistic Missiles Fleet Ballistic Missiles Ballistic Missile Submarines Nuclear Powered Fleet Ballistic Missile Submarines Nuclear Missiles Weapons Systems

Other added entries: Polaris Program

Smith, Bernard

Interview of Barney Smith, conducted by Mrs. Susan Frutkin and Dr. Peter Bruton

Date of Interview: 740000

Documentation: 4 Tapes, Index, Transcript 120 pp.

Interview number: BA-7-74

Abstract: Mr. Smith explains how management of R&D facilities in DoD worked: The Pentagon formulated programs, the TD at a laboratory went to a desk man at a Bureau for money, and the desk man allocated it according to a set budget. He discusses the establishment of the ASN (R&D), quotes Sidewinder as an example of a program not managed well, and describes how foundational research money was misused. Smith comments on bureau-lab dialogues and how an individual can make a big difference in laboratory management. He explains the Bureau's feelings at the labs being place under the CNM, the role of the DNL, and the SYSCOMs' dialogues with industry. He notes that the DNL was not an innovative force and was a poor contact between the labs and their customers. Smith states that RDT&E appropriations were not a serious problem, evaluates the success of Project 97, and says that the CNO is not competent enough to set exploratory development goals. He finds that block funding was an improvement over specific grants to the labs. Sidewinder was a success that broke all the rules, and Navy labs can afford mistakes more than private industry. Smith believes that rotation of personnel improves R&D management, that labs should be on the same level as the SYSCOMs, and that education of lab personnel should be continuous.

Repositories: NHC, DTNSRDC

Individuals mentioned: Davies, RADM Thomas

Kidd, ADM Issac C., Jr.

Institutions: Bureau of Ordnance Assistant Secretary of the Navy (R&D) Chief of Naval Material Chief of Naval Development Naval Weapons Laboratory Systems Commands

Other added entries: Sidewinder Missile Project Technical Development Plan

Navy Industrial Fund

Smith. Bernard

"Rapid Development: Bernard Smith", conducted by Cynthia Rouse

Date of Interview: 760608

Documentation: Transcript 17 pp.

Note: This interview is Chapter XII of <u>Dahlgren</u>, edited by

Kenneth G. McCollum

Abstract: Mr. Smith discusses his early interest in rockets, his appointment as Technical Director of the Naval Weapons Laboratory in 1964, his opinion of work at Dahlgren in the 1950s, reorganizations and mission changes, dealings with the Systems Commands, military-civilian relationships, the effect of civil rights legislation at Dahlgren, professional development, management training, the significance of the merger with NOL, White Oak, other proposed mergers, coworkers.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Colvard, Dr. James E. Lydanne, Dr. Russell H. Chase, ADM John Dawson Bernard, Charles W. Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Laboratory Naval Surface Weapons Center Naval Weapons Laboratory Systems Commands

Cities: White Oak, MD. Dahlgren, VA.

Other added entries: Technical Director

Smith, Howard

Interview of Howard Smith, conducted by Dr. Vincent Ponko

Date of Interview: 800916

Documentation: Index, Transcript 34 pp.

Interview number: DNL-T26

Abstract: Mr. Smith talks about military civilian relationships, the formation of the DNL/DLP, and the work of the first two DNL/DLP's. He comments on financial controls of in-house laboratories, labs under the DNL and the bureaus, and key people in Navy R&D, including Dr. Chalmers Sherwin, Dr. Robert A. Frosch, and SECDEF Robert S. McNamara. Smith discusses organizational changes in Navy R&D; in particular, the politicizing of R&D under President Kennedy, and the role of the DNL/DLP. He describes the technical ability of Navy R&D headquarters personnel, decentralization of DoD under SECDEF Laird, and lack of incentive for technical people in the labs.

Repositories: DTNSRDC

Individuals mentioned: Johnson, Dr. Gerald Lawson, Dr. Joel Laird, SECDEF Melvin Kennedy, PRES John F. Sherwin, Dr. Chalmers Frosch, Dr. Robert A. Towle, CAPT Bernard

Institutions: Director of Navy Laboratories Director of Laboratory Programs

Smith, VADM Levering

Interview of VADM Levering Smith, conducted by Albert B. Christman

Date of Interview: 670500

Documentation: Index, Transcript 18 pp.

Interview number: NOTS-75201-S48

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Smith discusses Parsons as an officer on the USS TEXAS and as a

proponent of the Proximity Fuze. He talks about Parsons' knack for spotting people's talents and his tenure as Deputy Chief of the Bureau of Ordnance. Smith also compares Parsons to Engineering Duty officers and notes Parsons' role in Navy nuclear research.

Repositorie: NWC, DINSRDC, NHC

Individuals mentioned: Parsons, RADM William S.

Sides, ADM

Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Bureau of Ordnance

Other added entries: Proximity Fuze Engineering Duty Officers

Smitley, Charles Raymond

Interview of Charles Raymond Smitley, conducted by Nelson Wood

Date of Interview: 790126

Documentation: Tapes, Transcript

Abstract: Mr. Smitley describes his background and education, and his work with the Harvard Underwater Sound

Laboratory.

Repositories: ARL

Institutions: U. S. Army Signal Corps

Harvard University

Underwater Sound Laboratory

Other added entries: Acoustics Research

Electronics Research Ordnance Research Snyder, RADM J. Edward

Interview of RADM J. Edward Snyder

Date of Interview: 741223

Documentation: 1 Tape

Interview number: BA-19

Repositories: DTNSRDC

Spangenburg, George

Interview of George Spangenburg

Date of Interview: 751210

Documentation: 1 Tape

Interview number: BA-25

Repositories: NHC, DTNSRDC

Stone, Dr. Harris B.

Interview of Dr. Harris B. Stone, conducted by Booz-Allen & Hamilton $\,$

Date of Interview: 741128

Documentation: 1 Tape (1 Side), Index

Interview number: BA-15

Abstract: This interview is part of Booz-Allen & Hamilton's review of Navy R&D Management 1943-1973. Dr. Stone discusses leaving the Army laboratory system to work for the Navy, feeling that the Navy had better military/civilian relations and more opportunities in in-house research. He describes his work coordinating electronics warfare and intelligence research in ONR, and the reorganization that placed his group under the CNO. He emphasizes the need to analyze Navy R&D programs in totality.

Repositories: NHC, DTNSRDC

Individuals mentioned: Zumwalt, ADM Elmo

Burns, Dr. Robert O.

Institutions: Office of Naval Research

U.S.Army Ft.Monmouth Ft.Huachuca

Chief of Naval Operations

Director of Research, Development, Test & Evaluation

Other added entries: Long Range Planning

Naval Research

Stoner, Donald W.

"Range Operations: Donald W. Stoner", conducted by

Cynthia Rouse

Date of Interview: 760914

Documentation: Transcript 19 pp.

Note: This interview is the Chapter IV of <u>Dahlgren</u>, edited

by Kenneth G. McCollum

Abstract: Mr. Stoner describes the work he did on bombsights and fuzes at Dahlgren between 1935 and 1941, experiments with armor-piercing bombs, general ordnance work during World War II, funding problems, change in emphasis to guided missiles, re-working World War II ammunition during the Vietnam War, problems with the local community, accidental deaths during ordnance tests, and co-workers.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Dement, Roger

Kemper, Dr. William Tubman, Benjamin Reynolds, Dr. Melvin F.

Institutions: Naval Proving Ground

Bureau of Ordnance

Naval Weapons Laboratory

Subjects: Ordnance

Ballistics

Armor Fuzes

Bombs Bombsights

Bumbsignes

Strand, Dr. Kai Aa.

Interview of Dr. Kai Aa. Strand, conducted by Dr. David H. DeVorkin

Date of Interview: 821208

Documentation: Tapes, 7.5 hours, Transcript, 140 pp.

Other interview date: 830103

Abstract: Mr. Strand's early life and training in Copenhagen are discussed, his work for the U. S. Army during World War II, and his time at the Sproul, Yerkes, and U. S. Naval Observatories.

Repositories: NASM

Institutions: Naval Observatory Yerkes Observatory Northwestern University Sproul Observatory U. S. Army

Subjects: Astronomy

Strauss, RADM Louis L.

Interview of RADM Louis L. Strauss, conducted by Albert B. Christman

Date of Interview: 670500

Documentation: Index, Transcript 13 pp.

Interview number: NOTS-75201-S47

Abstract: This interview was originally conducted as background for a biography RADM William S. Parsons. RADM Strauss recalls his first acquaintance with Parsons, in the Manhattan Project, and Parsons' feelings on the United States' atomic strategy. He details Parsons' relationship with SECNAV James Forrestal, his and Parsons' roles on the Atomic Energy Commission, and Dr. Robert Oppenheimer's loss of clearance.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Oppenheimer, Dr. Robert Forrestal, SECNAV James Parsons, RADM William S.

Institutions: Atomic Energy Commission

Naval Proving Ground

Cities: Dahlgren, VA.

Other added entries: Manhattan Project

Stump, ADM Felix Budwell

Interview of ADM Felix Budwell Stump

Date of Interview: 650000

Documentation: Transcript 364 pp.

Abstract: This interview concerns the Naval Academy, naval aviation training at Pensacola in 1919, aeronautical engineering 1922-1924, and the Naval Air Maintenance Procurement Division, Bureau of Aeronautics.

Repositories: COL, NHC

Institutions: Bureau of Aeronautics

Subjects: Naval Aviation

Cities: Pensacola, FL.

Other added entries: Aeronautical Engineering

Sullivan, ADM William

Interview of ADM William Sullivan

Date of Interview: 650000

Documentation: Transcript 1,784 pp.

Abstract: ADM Sullivan recalls his career in the Navy, with special mention of Naval construction, Navy yards in United States, the Trans-Siberian Railroad, his work at the Model Basin and Washington Naval Gun Factory, diving technology and mine-sweeping.

Repositories: COL, NHC

Institutions: Experimental Model Basin

Naval Gun Factory

Cities: Washington, DC.

Subjects: Naval Construction

Sykes, RADM James B.

Interview of RADM James Sykes, conducted by Albert B. Christman

Date of Interview: 670427

Documentation: Index, not taped 23 pp.

Interview number: NOTS-75201-S41

Abstract: RADM Sykes discusses his tenure as Commanding Officer at NOTS - his operating philosophy for the station, his relationship with scientists there, and the building of a neighborhood community. He recalls how he got his appointment to the Naval Academy and compares his other tours of duty with his time at NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E.

Sykes, Mrs. James

Institutions: Naval Ordnance Test Station

Salt Wells Pilot Plant

Cities: Inyokern, CA.

Thompson, Arthur

Interview of Arthur Thompson, conducted by Richard D. Glasow

Date of Interview: 800822

Documentation: Tapes, Transcript

Abstract: Mr. Thompson speaks of his his work with the

Ordnance Research Laboratory.

Repositories: ARL

Institutions: Ordnance Research Laboratory

Pennsylvania State University

Other added entries: Acoustics Research

Thompson, Dr. Louis T. E.

Interview of Dr. L. T. E. Thompson, conducted by Albert B. Christman $\,$

Date of Interview: 651107

Documentation: Index, Transcript 54 pp.

Interview number: NOTS-75201-S1

Other interview date: 651106

Abstract: This interview was originally conducted as background for a biography of RADM william S. Parsons. Dr. Thompson discusses Parsons' background, his early days at the Naval Proving Ground at Dahlgren, VA., and Parsons at NRL and NOTS. Thompson also includes an account of Parsons' work on the Manhattan Project, his thoughts on in house labs, and his role in the Naval hierarchy.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Burroughs, ADM Sherman E. Duncan, CAPT James
Hussey, VADM George F.
Lauritsen, Dr. Charles C.
Moulton, Prof. Forest Ray
Parsons, RADM William S.

Institutions: Naval Surface Weapons Center Naval Proving Ground Naval Research Laboratory Naval Ordnance Test Station Bureau of Ordnance

Cities: Dahlgren, VA.

Other added entries: Manhattan Project

Thompson, Dr. Louis T. E.

Interview of Dr. L. T. E. Thompson., conducted by Albert B. Christman

Date of Interview: 681110

Documentation: Transcript 40 pp.

Interview number: NWC-75201-S55

Abstract: Dr. Thompson comments informally on pre-World War II research at the Naval Proving Ground, weapons design, and the Naval bureaucracy.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Goddard, Dr. Robert Hedrick, CAPT David Schuyler, CAPT Michael

Institutions: Naval Proving Ground

Thompson, Dr. Louis T. E.

"Dahlgren's First Leading Scientist: Dr. L. T. E. Thompson", conducted by Cynthia Rouse

Date of Interview: 761208

Documentation: Transcript 8 pp.

Note: This interview is Chapter II of $\underline{\text{Dahlgren}}$, edited by Kenneth McCollum

Abstract: Dr. Thompson explains his decision to come to Dahlgren in 1923, comments on his personal goals, the environment at the Proving Ground, support from BUORD, his friendship with RADM Parsons, his theories on the value of experimental and developmental work.

Repositories: NSWC, DT. 3RDC

Individuals mentioned: Parsons, RADM William S. Stark, ADM Harold R.

Institutions: Bureau of Ordnance

Naval Proving Ground

Tibbitts, CAPT Barrick F.

Interview of CAPT Barrick F. Tibbitts, conducted by Dr. David K. Allison

Date of Interview: 800716

Documentation: Three Tapes (5 Sides), Index

Abstract: At the end of his tour at DTNSRDC, CAPT Tibbitts reviews his three years at the Center and his major accomplishments. He describes the Center's role in relation to other NAVMAT laboratories and its customers, the Systems Commands.

Repositories: DTNSRDC

Individuals mentioned: Powell, Dr. Alan Ricketts, COMO Myron V.

Institutions: David Taylor Naval Ship Research and Development Center Naval Sea Systems Command

Other added entries: Navy Industrial Fund Ship Design Engineering Duty Officers Long Range Planning Laboratory Management Military Construction

Tousey, Dr. Richard

Interview of Dr. Richard Tousey, conducted by Dr. David H. DeVorkin

Date of Interview: 811100

Other interview dates: 820108 and 820406

Documentation: Tapes, 9.5 hours, Transcript, 160 pp.

Abstract: Dr. Tousey talks about his education, interest in the UV solar spectrum, contact with E.O. Hulburt, and research in optics at the Naval Research Laboratory during World War II. After the war, Hulburt brought Tousey into the V-2 rocket program, and he designed a new UV spectrograph. He describes his involvement with and objectives of the V-2 program, and designs of Aerobee and Viking spectroscopic equipment.

Repositories: NASM

Individuals mentioned: Friedman, Dr. Herbert Van Allen, Dr. James Menzel, Dr. Donald Roberts, Dr. Walter Orr Krause, Dr. Ernst H. Hulburt, Dr. Edward O. Goldberg, Dr. Leo

Institutions: Naval Research Laboratory Harvard University Bureau of Aeronautics Applied Physics Laboratory Upper Air Rocket Research Panel

Subjects: Satellites X-Ray Astronomy Experimental Physics Solar Physics Optics Solar X-Ray Radiation

Other added entries: Coronagraphic Studies
Aerobee Rocket
Photographic Emulsions
Lyman-Alpha
V-2 Rocket
Nike Missile
Ultra Violet Solar Spectroscopy
Photoelectric Sensors
Infrared Sensors

Towle, CAPT Bernard

Interview of CAPT Bernard Towle, conducted by Dr. Samuel Rothman, Dr. Peter Bruton, and Mrs. Susan Frutkin

Date of Interview: 741217

Documentation: 3 Tapes, Index, Transcript 54 pp.

Interview number: BA-14

Abstract: CAPT Towle discusses lab management under SECDEF Robert S. McNamara, the philosophies of different Navy bureaus, and the combination of the Bureau of Ordnance and Bureau of Aeronautics. He talks about the establishment of the DNL, particularly why the labs should report to CNM. Towle explains the influence of outside sources on R&D, including the Sherwin Plan, the Mansfield Amendment, the National Science Foundation, and congressional input. He also comments on problems in the use of labs, in decision

making, and trends in top-level laboratory management.

Repositories: NHC, DTNSRDC

Individuals mentioned: Johnson, Dr. Gerald Sherwin, Dr. Chalmers
McNamara, SECDEF Robert S.

Institutions: Bureau of Aeronautics Bureau of Ordnance Chief of Naval Material Director of Navy Laboratories National Science Foundation

Other added entries: Mansfield Amendment Sherwin Plan

Towle, CAPT Bernard

Interview of CAPT Bernard Towle, conducted by Albert B. Christman

Date of Interview: 780314

Documentation: 1 Tape, Transcript 32 pp.

Interview number: DNL-T1-78

Abstract: CAPT Towle comments on his positions in the Navy in the 1960's, the pre-DNL lab management, and the introduction of the Sherwin Plan. He explains the Navy's compromise plan for re-organization of the labs - changes dictated by technology, SYSCOM resistance, and ADM Rivero's decision that military command of the labs is not essential. Towle talks about the DNL charter, concepts of the DNL position, and the first DNL. He describes the problems in selecting lab managers, SECDEF McNamara and the DNL, and DDR&E's influence. Towle discusses the Navy's loss of flexibility in controlling money and effect of SYSCOM opposition to the establishment of the DNL. He comments on the second DNL, ADM Kidd's view of the labs, and the future of the lab system.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Rivero, ADM Horacio Rothman, Dr. Samuel
McNamara, SECDEF Robert S.
Kidd, ADM Issac C., Jr.
Andrews, CAPT Albert
Smith, Howard

Institutions: Assistant Secretary of the Navy (R&D) Chief of Naval Material Director of Navy Laboratories Director of Defense Research and Engineering Systems Commands

Other added entries: Sherwin Plan

Tremblay, Harold

Interview of Mr. Harold Tremblay, conducted by Tom Misa and Ed Todd $\,$

Date of Interview: 820706

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-7

Abstract: Mr. Tremblay describes his personal background and his early NAMU work, including the V-2 Missile Studies, glider research, and early television projects, leading to airborne video cameras. He discusses Project Typhoon, his relations with RCA, and BUAER's role at NADC. Tremblay talks about Typhoon's construction as a vacuum tube computer, its applications, and its size.

Repositories: NADC, DTNSRDC

Institutions: Naval Air Development Center Radio Corporation of America Princeton University Bureau of Aeronautics Naval Air Modification Unit

Subjects: Computer Simulation Guided Missile Computers Missile Systems

Other added entries: Typhoon Project

Whirlwind Project Hurricane Project Computer Research REAC Computers V-2 Rocket Tremblay, Harold

Interview of Harold Tremblay, conducted by $\operatorname{\mathtt{Tom}}\nolimits$ $\operatorname{\mathtt{Misa}}\nolimits$ and $\operatorname{\mathtt{Ed}}\nolimits$ $\operatorname{\mathtt{Todd}}\nolimits$

Date of Interview: 820720

Documentation: 1 Tape, Index 2 pp.

Interview number: NADC-14

Abstract: Mr. Tremblay discusses the relationship between NADC and the University of Pennsylvania, the creation of the Numerical Analysis Branch at NADC in 1953, and the reorganization of computer work there in 1955 and 1956. He talks about the ambiguity in the term "systems concept", establishment of the Aeronautical Computer Lab at NADC, and connections between computers and centrifuges. Tremblay describes computer work in the 1960's and the development of advanced software in the 1970's.

Repositories: NADC, DTNSRDC

Individuals mentioned: Hardy, Dr. James D.

Institutions: Naval Air Development Center University of Pennsylvania Naval Proving Ground Aeronautical Computer Laboratory U. S. Army

Subjects: Computer Softwear Space Simulation Aerospace Medicine Computer Simulation Fire Control Computers Ballistic Trajectories

Cities: Dahlgren, VA.

Other added entries: ENIAC Computer

X-15 Project Mercury Project Gemini Project Human Centrifuge



Harold Tremblay of the Naval Air Development Center.

Trexler, James Hugh

Interview of James Hugh Trexler, conducted by Dr . David K. Allison

Date of Interview: 801020

 $\boldsymbol{Documentation:}$ 5 Tapes (10 Sides), Background and list of questions asked

Abstract: Mr. Trexler talks about radio telescope projects done at Stump Neck, MD, and Sugar Grove, WV, and research in electronic counter-measures at NRL. The interview is supplemented by a collection of papers on research management.

Repositories: NRL

Institutions: Naval Research Laboratory

Cities: Stump Neck, MD. Sugar Grove, WV.

Other added entries: Radio Telescope Research

Electronic Counter-measures

Truax, CAPT Robert

Interview of CAPT Robert Truax, conducted by Albert B. Christman

Date of Interview: 720316

Documentation: Index, Transcript 27 pp.

Interview number: NWC-751-S82

Abstract: CAPT Truax talks about his own research at the Naval Academy and his early contacts in Maryland. He describes his work in California during World War II, the competition between himself and Dr. Robert Goddard, and the similarities and differences in their work. Truax comments on Goddard's general disposition, his penchant for secrecy, his poor health, and his research methods.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Cox, ADM Fischer, LTC Frank Goddard, Dr. Robert

Institutions: U. S. Naval Academy

Other added entries: Rocket Research

Upgren, A.

Interview of A. Upgren, conducted by David H. DeVorkin

Date of Interview: 770000

Documentation: Tapes

Repository: AIP

Subjects: Astronomy

Van Allen, Dr. James

Interview of Dr. James Van Allen, conducted by Dr. David H. DeVorkin and Allan Needell

Date of Interview: 810218

Documentation: Tapes, 18.5 hours, Transcript, 362 pp.

Other interview dates: 810712, 810618, 810622, 810715, 810116,

810728, 810806

Abstract: Dr. Van Allen talks about his family and life during World War I in Iowa, his educational background, thesis subjects, and post-graduation job at the Department of Terrestrial Magnetism in Washington and interest in cosmic ray studies. He describes his work in World War II in the Pacific, Merle Tuve and the development of the Proximity Fuze, post-war years at the APL, work with NRL on the V-2 rockets, and achievements of the V-2 experiments, the development of the Rockoon, the Rocket Panels' involvement during the International Geophysical Year, the effect of Sputnik and the rush to launch Vanguard, the establishment of NASA, satellites, the "Van Allen" radiation belts, and the outlook for space science.

Repositories: NASM

Tousey, Dr. Richard Tuve, Dr. Merle Krause, Dr. Ernst H. Toftoy, BG Holger N. Zwicky, Prof. Fritz

Braun, Wernher von Johnson, PRES Lyndon B. Millikan, Dr. Robert A.

Institutions: Naval Research Laboratory Bureau of Ordnance Applied Physics Laboratory International Geophysical Year

Subjects: Satellites Cosmic Rays Physics Magnetospherics

Other added entries: Proximity Fuze
Van Allen Radiation Belt
USS NORTON SOUND
V-2 Rocket
Sputnik
Aerobee Rocket
Vanguard Program
Explorer Program
Project Sherwood
Rockoon

Vossler, RADM Curtis F.

Interview of RADM Curtis F. Vossler, conducted by J. D. Gerrard-Gough

Date of Interview: 730400

Documentation: Index, Transcript 34 pp.

Interview number: NOTS-75201-S85

Abstract: RADM Vossler explains how he came to be in the Navy and talks about his early career. He describes testing rockets and new planes at NOTS and comments on the command structure at NOTS-in particular, the tenures of CAPTs John T. Hayward and James Sykes as Commanding Officer.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Armitage, LT John M.
Burroughs, ADM Sherman E.
Hayward, ADM John T.
Pollock, CAPT Thomas
Sykes, RADM James B.

Institutions: Naval Ordnance Test Station

Other added entries: Rocket Testing

Aircraft Testing Commanding Officer

Wakelin, Dr. James H.

Interview of Dr. James H. Wakelin, conducted by Dr. Peter Bruton, Mrs. Susan Frutkin, and CAPT Robert L. Hansen

Date of Interview: 740900

Documentation: 2 Tapes, Index, Transcript 110 pp.

Interview number: BA-9

Abstract: Dr. Wakelin discusses R&D programs in the 1950's, establishment of the ASN (R&D), the Polaris Program, and DDR&E as a pressure mechanism for ASN (R&D). He discusses the ONR-Blue Suit Navy relationship, management responsibilities for DDR&E appropriations, and the need for a coherent R&D program. Wakelin describes the Navy R&D planning system and program structure. He also mentions ideas for improving lab operations, the creation of the DNL, and the ASN (R&D) as a liaison between the Navy and DoD, and the difficulty of attracting qualified technical people.

Repositories: NHC, DTNSRDC

Individuals mentioned: Franke, William B.

Hayward, ADM John T.

McNamara, SECDEF Robert S.

Institutions: Director of Defense Research and Engineering

Assistant Secretary of the Navy (R&D)

Bureau of Ordnance Department of Defense

Other added entries: Polaris Missile

Tentative Specific Organizational Requirement

Ward, Dr. Newton E.

Interview of Dr. Newton E. Ward, conducted by J. D. Gerrard-Gough and Max R. Smith

Date of Interview: 740524

Documentation: Index, Transcript 36 pp.

Interview number: S-91

Abstract: Dr. Ward describes the early NOTS organizational structure and talks about problems with air-to-ground missiles like Sidewinder and Dove. He comments on the first proposals for Walleye, its funding, and its building problems. Ward recalls its early launchings and production problems and conflicts with Martin Company.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Crawford, Jack A.

McLean, Dr. William B.

Institutions: Naval Ordnance Test Station

Martin Company

Subjects: Missiles

Other added entries: Sidewinder Missile Project Walleye Missile Project

Dove Missile Project

Walker, Eric A.

Interview of Eric A. Walker

Date of Interview: 791128

Documentation: Tapes, Transcript

Abstract: Mr. Walker desr es his background and education, and his work at the Harvard Underwater Sound Laboratory.

Repositories: ARL

Institutions: Harvard University Underwater Sound Laboratory

Other added entries: Acoustics Research

Ward, Dr. Newton E.

Interview of Dr. Newton E. Ward, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 741023

Documentation: Index, Transcript 46 pp.

Interview number: 5-94

Abstract: Dr. Ward discusses the management of NOTS when he first arrived, and Dr. Louis T. E. Thompson as NOTS' first technical director. He comments on the leadership abilities and roles of other technical directors, including Dr. Brown, Dr. William B. McLean, and Dr. Thomas Amlie, and Dr. Haskell G. Wilson. Ward reflects on the commanding officers who have been at NOTS, military-civilian relationships there, and the trend towards more bureaucracy in R&D.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Amlie, Dr. Thomas S. Brown, Dr. Frederick W. Frosch, Dr. Robert A. LaBerge, Dr. Walter McLean, Dr. William B. Thompson, Dr. Louis T. E. Wilson, Dr. Haskell G.

Institutions: Naval Ordnance Test Station Naval Weapons Center

Warner, Dr. Arthur H.

Interview of Dr. Arthur H. Warner, conducted by J. D. Gerrard-Gough

Date of Interview: 751211

Documentation: Index, Transcript 10 pp.

Interview number: 5313 S-102

Abstract: Dr. Warner discusses NOTS history, including a housing shortage problem, SECNAV Forrestal's visit to NOTS in 1947, and the role of ADMs Switzer and Vieweg in shaping NOTS. He comments on Dr. Bruce Sage, Dr. Wallace C. Brode, the need for a better computing center at NOTS, and Dr. Willaim McLean's work on the Sidewinder Missile.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Brode, Dr. Wallace C. Hayward ADM John T. McLean, Dr. William B. Switzer, VADM W. G. Sykes, RADM James B. Forrestal, SECNAV James Vieweg, RADM Walter V. R.

Institutions: Naval Ordnance Test Station

Other added entries: Sidewinder Missile Project

Waterman, Dr. Peter

Interview of Dr. Peter Waterman

Date of Interview: 740000

Documentation: 1 Tape, Transcript 32 pp.

Interview number: BA-12

Abstract: Dr. Waterman speaks about the maintenance of Navy R&D facilities and programs, cost effectiveness of programs, and Navy R&D, in general, from World War II to the present.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Clements, William

Other added entries: Laboratory Management

Watson, Dr. Earnest C.

Interview of Dr. Earnest C. Watson, conducted by Albert B. Christman

Date of Interview: 700220

Documentation: Index, Transcript 68 pp.

Interview number: NWC - 75201 - S69

Note: Other date: 700219

Abstract: Dr. Watson talks about scientists in World War I, Dr. Robert Millikan, and Dr. Richard C. Tolman. He describes

CalTech's role in research during World War II, Dr. Charles C. Lauritsen, and Dr. Vannevar Bush. Watson comments on the development of rocket propellents and the proximity fuze and Dr. Max G. Mason, He details the development of NOTS and CalTech's role there after World War II.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Bush, Dr. Vannevar Fowler, Dr. William Hale, George Ellery Lauritsen, Dr. Charles C. Mason, Dr. Max G. Michelson, Dr. Albert A. Millikan, Dr. Robert A. Noyer, Arthur Sage, Dr. Bruce Tolman, Dr. Richard C.

Institutions: Naval Ordinance Test Station California Institute of Technology

Cities: Inyokern, CA.

Other added entries: Proximity Fuze Rocket Propellents

Watson, Clement

Interview of Clement Watson

Date of Interview: 721100

Documentation: Transcript 65 pp.

Abstract: Mr. Watson was Presentation/Public relations contractor for Polaris. This is one of a series of seven interviews on concept and development of Polaris program conducted by the U.S. Naval Institute Oral History Program.

Repositories: NHC, NWCM, USNA, USNI

Subjects: Submarine Launched Ballistic Missiles Fleet Ballistic Missiles Ballistic Missile Submarines Nuclear Powered Fleet Ballistic Missile Submarines Nuclear Missiles Weapons Systems

Other added entries: Polaris Program

Watson-Watt, Sir Robert Alexander

Interview of Sir Robert Alexander Watson-Watt

Date of Interview: 610000

Documentation: Transcript 568 pp.

Abstract: Watson-Watt reminisces about his involvement in meteorological work, World War I, radio and static studies, director finders, the Department of Scientific and Industrial Research, airborne radar, planned position indicators, secondary radar devices, interallied intelligence missions, and V-1 and V-2 raids.

Repositories: COL

Individuals mentioned: Tizard, Henry

Subjects: Radar Airborne Radar

Waynick, Arthur H.

Interview of Arthur H. Waynick, conducted by Richard D. Glasow

Date of Interview: 800321

Documentation: Tapes, Transcript

Abstract: Mr. Waynick describes his background and education, his work at the Harvard Underwater Sound Laboratory and the Applied Research Laboratory.

Repositories: ARL

Institutions: Pennsylvania State University

Harvard University

Underwater Sound Laboratory Applied Research Laboratory

Other added entries: Acoustics Research

Weaver, Dr. Warren

Interview of Dr. Warren Weaver

Date of Interview: 610000

Documentation: Transcript 783 pp.

Abstract: Mr. Weaver discusses World War II, the NDRC, range finders, fuzes, bomb sights, gun directors, electrical predictors, computers, and the Applied Mathematics Panel.

Repositories: COL

Institutions: Applied Mathematics Panel National Defense Research Committee

Individuals mentioned: Tizard, Henry Millikan, Dr. Robert A.

Subjects: Range Finders

Fuzes
Bomb Sights
Ordnance

Welford, Randolph

Interview of Randolph Welford, conducted by Albert B. Christman and Dr. Marjorie Ciarlante

Date of Interview: 820700

Documentation: 1 Tape (15 Minutes Total)

Interview number: ABC-1

Note: Mr. Welford is the nephew of Dr. Louis T. E. Thompson

Repositories: DTNSRDC

Individuals mentioned: Thompson, Dr. Louis T. E.

White, Dr. Howard J., Jr.

Interview of Dr. Howard A. J. White, Jr., conducted by Dr. Vincent Ponko

Date of Interview: 801200

Documentation: 4 Tapes, Index, Transcript 27 pp.

Interview number: DNL-T32

Abstract: Dr. White discusses the background to his appointment as Special Assistant for Research to the ASN (R&D). He describes his duties, including budgeting 6.1 and 6.2 funds, working as a liaison between the labs and ASN (R&D), and studying the problem of laboratory management in a military-civilian matrix. White comments on the impact of the Task Force 97 Project Report, the Dillon Review of 1962, and the Furnes and Austin Reports. He talks about the Sherwin Plan and the Navy R&D community's reaction to it, and key R&D people like Dr. William B. McLean, Dr. Haskell G. Wilson, and SECNAV Paul Nitze. White discusses the needs the Navy's in-house labs must meet, the justification for in-house labs, and Navy labs in the early 1960's. He also comments on SECDEF McNamara.

Repositories: NWC, DTNSRDC, NHC

Individuals . entioned: McLean, Dr. William B. Wilson, Dr. Haskell G.
Nitze, SECNAV Paul
McNamara, SECDEF Robert S.
Sherwin, Dr. Chalmers
Wakelin, Dr. James H.

Institutions: Secretary of Defense Secretary of the Navy

Other added entries: Sherwin Plan Task Force 97 Dillon Report Furnes Report Austin Report Whitmarsh, David

Interview of David Whitmarsh, conducted by Nelson Wood

Date of Interview: 790126

Documentation: Tapes, Transcript

Abstract: Mr. Whitmarsh talks about his work at the Ordnance

Research Laboratory.

Repositories: ARL

Institutions: Naval Torpedo Station Ordnance Research Laboratory Pennsylvania State University Bureau of Ordnance

Cities: Newport, RI.

Subjects: Torpedos

Other added entries: Acoustics Research

Ordnance Research

Wiegand, Dr. James

Interview of Dr. James Wiegand, conducted by Michelle Ballenger $% \left\{ 1,2,\ldots,n\right\}$

Date of Interview: 720800

Documentation: Index, Transcript 28 pp.

Interview number: S-111

Abstract: Dr. Wiegand talks about his association with the Solid Propellent Branch at NOTS. He describes the China Lake Pilot Plant, social interaction between military and civilian personnel, and Dr. Louis T. E. Thompson. Wiegand comments on program direction from Washington, relations with Aerojet and major problems encountered by the rocket department. He also explains his reasons for leaving NOTS.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Ellis, Dr. Emory L. Gould, Al

McLean, Dr. William B.

Patton, Harold

Sage, Dr. Bruce Smith, VADM Levering Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station Naval Weapons Center China Lake Pilot Plant Aerojet General Corporation

Cities: China Lake, CA.

Other added entries: Rocket Research

Wilcox, Douglas

Interview of Douglas Wilcox, conducted by J. D. Gerrard-Gough

Date of Interview: 751223

Documentation: Index, Transcript 11 pp.

Interview number: 5313 S-103

Abstract: Mr. Wilcox recalls his entry at NOTS-Pasadena as an "NP" (New Professional) and his later appointment as Head of the Underwater Ordnance Department. He describes the communication problems between China Lake and Pasadena and how they were solved. Wilcox comments on problems in the military-civilian relationships at NOTS, the emphasis there on the Junior Professional Program, and his switch to the Naval Undersea Center at San Diego, CA. He also states that he did not favor the break-up of the China Lake-Pasadena arrangement.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B.

Wilson, Dr. Haskell G.

Institutions: Naval Ordnance Test Station

Naval Undersea Center

Cities: China Lake, CA.

Pasadena, CA. San Diego, CA. Wilcox, Douglas

Interview of Douglas Wilcox, conducted by Albert B. Christman

Date of Interview: 780313

Documentation: 1 tape, Transcript 22 pp.

Interview number: DNL-T5-78

Abstract: Wilson comments on his early work at NOTS, his move from NOTS to NUC, and his stint as Technical Director there. He talks about the influence of Dr. William B. McLean; in particular, his ability at NOTS/NWC to cut through red tape and achieve real progress in weapons systems. Wilson also describes the problem of layering in the federal bureaucracy, the need for greater trust and flexibility in the laboratory system, and for a better recorded history of what happened at Navy laboratories.

Repositories: NHC, DTNSRDC

Individuals mentioned: McLean, Dr. William B.

Wilson. Dr. Haskell G.

Institutions: Naval Ordnance Test Station

Naval Ocean Systems Center

Other added entries: Technical Director

Wilcox, Dr. Howard A.

Interview of Dr. Howard A. Wilcox, conducted by Mickey Strang $% \left(1\right) =\left(1\right) +\left(1$

Date of Interview: 760525

Documentation: Index, Transcript 13 pp.

Interview number: S-107

Abstract: Dr. Wilcox comments on the projects he was involved in NOTS, including NOTSNIK, a response to Sputnik, and ASROC. He also talks about satellites as collectors of solar energy and their extremely high cost.

Repositories: NWC, DTNSRDC, NHC

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Subjects: Satellites

Other added entries: Sputnik

NOTSNIK

Antisubmarine Rocket

Wilcox, Dr. Howard A.

Interview of Dr. Howard A. Wilcox, conducted by Albert B. Christman with Bert Larson

Date of Interview: 780315

Documentation: 1 Tape, Transcript 23 pp.

Interview number: DNL-T9-78

Abstract: Dr. Wilcox describes various problems with Navy labs before World War II, including increasing bureaucracy, the insertion of new managers without wartime lab experience, and budget constraints. He commments on lack of innovative weapons ideas and narrowly defined lab missions. He discusses Dr. William B. McLean's leadership qualities, his ability to cut red tape, and his technical and administrative skills. Wilcox comments on Dr. Walter LaBerge as an R&D leader, good aspects of the Navy lab system, and the roles of headquarters, labs, and industry in Navy R&D. He states that there is a need for more vigorous prosecution of Navy R&D, talks about the effect of Sputnik and the Navy's role in Vietnam.

Repositories: DTNSRDC

Individuals mentioned: McLean, Dr. William B.

LaBerge, Dr. Walter Thompson, Dr. Louis T. E.

Institutions: Naval Ordnance Test Station

Naval Weapons Center

Other added entries: Sputnik

Vietnam War

Wilcox, Dr. Howard A.

Interview of Dr. Howard A. Wilcox, conducted by Starla

Date of Interview: 800900

Documentation: Transcript 36 pp.

Interview number: DNL-T25

Abstract: Dr. Wilcox gives his impressions of his longtime colleague Dr. William B. McLean. He talks about McLean's involvement on the Sidewinder Missile Project; in particular, his leadership style, technical problems involved, and problems of Air Force acceptance of the missile. Wilcox comments on McLean as NOTS Technical Director and as a lobbyist in Washington. He discusses McLean's frustration with increasing government bureaucracy, his move to NUC as TD, and problems in combining NOTS and NEL functions at NUC. He comments on officers' attitudes toward McLean, McLean's retirement, and the role of Edith LaVerne McLean.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: McLean, Dr. William B. McLean, Edith LaVerne (Mrs. William B.)

Institutions: Naval Ordnance Test Station

Naval Undersea Center

Naval Electronics Laboratory

Naval Weapons Center

U. S. Air Force

Other added entries: Sidewinder Missile Project

Willey, Thomas

Interview of Tom Willey, conducted by Tom Misa and Ed

Date of Interview: 820715

Documentation: 2 Tapes, Index 3 pp.

Interview number: NADC-10,11

Abstract: Mr. Willey discusses his personal background and his work in Systems Engineering at NADC, including the A-NEW Program, Airborne Computer Development Systems in the



Thomas Willey of the Naval Air Development Center.

1960's, and the Proteus System of Signal Processing. He talks about the impact of Systems Engineering, the Polaris Submarine and its effect on ASW, and re-organization of NADC in the early 1970's. Willey comments on audits of programs over 6-12 year periods.

Repositories: NADC, DTNSRDC

Individuals mentioned: Aslo, Izzy

Cody, Harold

Institutions: Naval Air Development Center

Naval Air Systems Command

Anti-Submarine Warfare Laboratory

Subjects: Systems Engineering Antisubmarine Warfare Antisubmarine Aircraft

Other added entries: Polaris Submarines

Proteus System A-NEW Program

Williams, ADM Henry

Interview of ADM Henry Williams

Date of Interview: 630000

Documentation: Transcript 251 pp.

Abstract: ADM Williams recalls his career in the Navy, remembering the Spanish-American War, taking a graduate course in naval architecture in Paris, 1899-1901, his work as a naval construction specialist dealing with launching problems, the developments of plastic ship bottom paint, and submarine rescue chambers.

Repositories: COL, NHC

Individuals mentioned: Sims, ADM William Taylor, ADM Henry Robinson, ADM Samuel M. Land, ADM Emory S.

Institutions: Bureau of Ships

Subjects: Naval Construction

Naval Architecture

Polymers

Other added entries: Submarine Rescue Chambers

Williams, ADM John G. Jr.

Interview of ADM John G. Williams Jr., conducted by Leroy L. Doig III, and Dr. David K. Allison

Date of Interview: 830712

Documentation: Diskette, Transcript 9 pp.

Interview number: DNL-T38

Abstract: ADM Williams discusses the purpose of R&D Centers, and changes that occurred during his tenure as CNM, the Corporate Plan for NAVMAT, selection of Technical Directors, selection of good personnel, the laboratories' role as "smart buyers" for the Navy, and the laboratories as part of NAVMAT.

Repositories: NWC, DTNSRDC

Individuals mentioned: Colvard, Dr. James E.
Hillyer, Robert
Paisley, Dr. Melvyn R.
Whittle, ADM Alfred J., Jr.

Institutions: Director of Navy Laboratories
Deputy Chief of Naval Material
Chief of Naval Material
Chief of Naval Operations
Naval Material Command

Other added entries: Navy Industrial Fund Corporate Plan

Wills, James R.

Interview of James R. Wills, conducted by Leroy L. Doig

Date of Interview: 810107

Documentation: Index, Transcript 29 pp.

Interview number: S-116

Abstract: Mr. Wills comments on the closure of the NOTS branch at Corona and its move to China Lake in 1970. He

talks about fuzing projects, in general, and the Air Force, Navy, and NWC's contact with NATO. Wills extols NWC's safety record and reflects on the work of Mr. Robert Hillyer, the lack of continuity at the Technical Director level at NWC, and NWC as a national asset.

Repositories: NWC, DTNSRQC, NHC

Individuals mentioned: Hillyer, Robert

Nastromeno, John

Institutions: Naval Ordnance Test Station

Naval Weapons Center

North Atlantic Treaty Organization

U. S. Air Force

Cities: China Lake, CA.

Corona, CA.

Other added entries: Fuze Research

Wilson, Dr. Haskell G.

Interview of Dr. Haskell G. Wilson, conducted by Albert B. Christman

Date of Interview: 700911

Documentation: Transcript 13 pp.

Interview number: S-93

Abstract: Dr. Wilson discusses in a general way public attitudes towards the Navy and the armed services as a whole. He comments on the future of R&D installations and the changing military role of the Navy and the Marines.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Zumwalt, ADM Elmo

Wilson, CAPT Eugene Edward

Interview of CAPT Eugene Edward Wilson

Date of Interview: 620000

Documentation: Transcript 974 pp.

Abstract: Naval Academy; Engineering School, Columbia; Aviation Mechanics School, Great Lakes; Bureau of

Aeronautics; private industry.

Repositories: COL, NHC

Individuals mentioned: Sikorsky, Igor Boeing, William Moffett, ADM William A. King, FADM Ernest Forrestal, SECNAV James

Wingo, Carl H., Jr.

"Naval Guns: Carl H. Wingo, Jr.", conducted by Cynthia Rouse

Date of Interview: 760930

Documentation: Transcript 13 pp.

Note: This interview is Chapter XI of $\underline{\text{Dahlgren}}$, edited by Kenneth G. McCollum

Abstract: Mr. Wingo describes the changes in ammunition testing since he came to Dahlgren in 1951, the effect of the Korean War, refitting the guns of the NEW JERSEY, the development of shipboard missiles and guided projectiles, lightweight guns, the Naval Gunnery Improvement Program, HIFRAG rounds, and EOSS.

Repositories: NSWC. DTNSRDC

Individuals mentioned: Kitterman, Warren

Kirschke, Jim

Institutions: Naval Ordna ce Laboratory

Subjects: Ordnance Projectiles Guided Projectiles

Other added entries: Naval Gunnery

Electro-Optical Sensor System USS NEW JERSEY

Winnick, Robert L.

Interview of Robert L. Winnick, conducted by Albert B. Christman

Date of Interview: 780000

Documentation: 1 Tape, Transcript 26 pp.

Interview number: DNL-T17-78

Abstract: Mr. Winnick discusses sonar and torpedo R&D work conducted at NUSC, including torpedo research during World War II. He talks about the effect of the Bureaus and Systems Commands on torpedo development and his position as Director of Fleet Readiness. Winnick also comments on Naval re-organization in the late 1960's and 1970's.

Repositories: DTNSRDC

Institutions: Naval Underwater Systems Center

Naval Sea Systems Command

Systems Commands

Other added entries: Torpedos

Sonar

Wislicenus, Dr. George F.

Interview of Dr. George $\, {\bf F} \, . \,$ Wislicenus, conducted by Nelson Wood

Date of Interview: 800821

Documentation: Tapes, Transcript

Abstract: Dr. Wislicenus speaks of his background and education, his work with the OSRD and his research in acoustics.

Repositories: ARL

Institutions: Office of Scientific Research and Development
National Defense Research Committee
California Institute of Technology

Other added entries: Acoustics Research

Withington, RADM Frederick S.

"Dahlgren in Perspective: RADM Frederick S. Withington", conducted by Cynthia Rouse

Date of Interview: 761103

Documentation: 12 pp.

Note: This interview is Chapter XIII of $\underline{\text{Dahlgren}}$, edited by Kenneth G. McCollum

Abstract: RADM Withington describes his education, tours of different ordnance facilities in the 1920s, the primitive facilities at Dahlgren when he began work there, his work at the Naval Gun Factory on torpedo directors and gunfire control directors from 1934-1936, his work with the Bureau of Ordnance, his position as OIC at the Naval Ordnance Laboratory, White Oak MD, and later positions with AEC and Chief of BUORD, and individuals who had particular influence on Naval R&D.

Repositories: NSWC, DTNSRDC

Individuals mentioned: Johnson, Dr. Ellis
Lauritsen, Dr. Charles C.
Bradbury, Dr. Norris E.
Tuve, Dr. Merle
Leary, VADM Herbert F.

Institutions: Naval Proving Ground Naval Gun Factory Bureau of Ordnance Naval Weapons Laboratory Atomic Energy Commission

Subjects: Ordnance Torpedo Directors Gun Directors

Cities: White Oak, MD. Washington, DC. Dahlgren, VA.

Other added entries: Laboratory Consolidations

Defense Spending

Funding

Wolff, Dr. Irving

Interview of Dr. Irving Wolff, conducted by Dr. David K. Allison

Date of Interview: 7910406

Documentation: 1 Tape, Index 3 pp.

Abstract: An RCA physicist involved in radar research in the 1930s and 1940s interviewed in 1976 as part of an RCA history project, copies of the 2 tapes produced and an index prepared by Dr. Allison are also contained in the NRL oral history collection. Wolff discusses his background, education, contacts with the Army and NRL, personnel at NRL, the establishment of the Radiation Laboratory, contact with German engineers in the 1930s which suggested that both sides knew that the other was working on radar detection, and his connection with Isidor Rabi.

Repositories: NRL

Individuals mentioned: Rabi, Isidor I.
Zahl, Dr. Harold A.
Taylor, Dr. A. Hoyt
Ruble, ADM W. J.

Institutions: Radiation Laboratory Victor Talking Machine Company Bell Laboratories Radio Corporation of America U. S. Army Signal Corps

Subjects: Radar Microwave Radar

Worchesek, CAPT Robert R.

Interview of CAPT Robert R. Worchesek, conducted by Roger Kempler $\,$

Date of Interview: 8208316

Documentation: Transcript, 26 pp

Abstract: CAPT Worchesek discussed the circumstances of his involvement with Naval personnel research, the people involved in the reorganization of the Navy's personnel R&D program, the CO/TD dual executive structure of the Navy Laboratories, the problems of justifying personnel R&D relative to hardware R&D, problems of rehabilitation of NOSC

barracks spaces, the Research Liaison Office, close managerial control of NPRDC, prime movers in NPRDC development, its role as coordinator for Human Resources R&D, his major contributions during transition to a single center, his view on CNM management control, and a post-retirement view of the Center.

Repositories: NPRDC, DTNSRDC

Individuals mentioned: Kinnear, RADM George E. R. Collins, Dr. John J. Sjoholm, Dr. Allan A. Bagley, VADM David H. Ramras, Eugene M.

Institutions: Navy Personnel Research and Development Center

Subjects: Personnel Research

Word, Thomas J.

Interview of Thomas J. Word, conducted by Leroy L. Doig III

Date of Interview: 821128

Other interview date: 821129

Documentation: 4 Tapes

Interview number: S-143

Abstract: Interview primarily concerned with NWC management, organization, and people, focusing on problems.

Repositories: NWC

Institutions: Naval Weapons Center

Cities: China Lake, CA.

Other added entries: Laboratory Management

York, Dr. Herbert

Interview of Dr. Herbert York, conducted by Albert B. Christman

Date of Interview: 800924

Documentation: 1 Tape, Transcript 40 pp.

Interview number: DNL-T24-80

Abstract: Dr. York discusses the effect of Sputnik on Navy R&D, his position as Chief Scientist of ARPA, and his selection to be the first DDR&E. He talks about the reasons for DDR&E, its relationship with the services, and the uniformed Navy's success in keeping R&D projects under control. York describes DDR&D's contacts with high level government officials, major trends and problems he encountered as DDR&E, and his management style. He comments on SECDEF McNamara's effect on centralization of the armed forces, DDR&D and the general growth of bureaucracy, and why he left DDR&E. York also details the effect of increased R&D on the escalation of the arms race and trends in technology.

Repositories: DTNSRDC

Individuals mentioned: Eisenhower, PRES Dwight D.

McNamara, SECDEF Robert S.

Institutions: Director of Defense Research and Engineering

Secretary of the Navy

Assistant Secretary of the Navy (R&D) Advanced Research Projects Agency

Other added entries: Sputnik

Young, Dr. Leo C.

Interview of Dr. Leo. C. Young, conducted by Stanford C. Hooper

Date of Interview: nd

Interview Number: 150-151

Abstract: This interview is from the Stanford C. Hooper papers in the Library of Congress Manuscript Division, it is a duplication of tapes 150 and 151 of Hooper's series of tapes on the "History of Radio-Radar-Sonar." Young reminisces about the discovery and early development of radar at the Naval Research Laboratory, and a bit about his

background.

Repositories: NRL, LC

Individuals mentioned: Hooper, RADM Stanford C.

Institutions: Naval Research Laboratory

Subjects: Radar Radio Detection

Youngblood, Curtis

Interview of Curtis Youngblood, conducted by Albert B. Christman ${\sf Christman}$

Date of Interview: 670500

Documentation: Index, Transcript

Interview number: NOTS-75201-S51

Abstract: This interview was originally conducted as background for a biography of RADM William S. Parsons. Mr. Youngblood reminisces about his personal relationship with RADM Parsons at the Naval Proving Ground and during Operation Crossroads. He also talks about the chain of command at NPG; in particular, CAPT Hennick and Parsons' relationships with CAPT Hedrick, ADM Blandy, Dr. Louis T. E. Thompson, and Dr. Ralph Sawyer.

Repositories: NWC, DTNSRDC, NHC

Individuals mentioned: Blandy, ADM George Bradbury, Dr. Norris E. Hedrick, CAPT David Parsons, RADM William S. Sawyer, Dr. Ralph A. Thompson, Dr. Louis T. E.

Institutions: Naval Proving Ground

Systems Commands

Cities: Dahlgren, VA.

Zisman, Dr. William A.

Interview of Dr. William A. Zisman, conducted by Steven ${\tt Markel}$

Date of Interview: 800724

Documentation: Six Tapes (11 Sides)

Other interview dates: 800715, 800716

Abstract: Dr. Zisman discusses the American scientific community in the 1930's, problems of placement for Jewish scientists, and chemical research from 1937 to 1978. Included are two interviews with associates. Zisman came to NRL in 1933 and made major contributions to the development of synthetic lubricants, including pioneering research leading to the development of Teflon, and establishment of surface chemistry as a critical field of naval research.

Repositories: NRL

Institutions: Naval Research Laboratory

Subjects: Synthetic Lubricants

Other added entries: Chemical Research

Teflon

Surface Chemistry

CONTACT POINTS AT ORAL HISTORY REPOSITORIES

AIP:

American Institute of Physics 335 East 45th Street New York, New York 10017 (212) 661-9404

ARL:

Applied Research Laboratory Pennsylvania State University P. O. Box 30 State College, Pennsylvania 16801 (814) 865-6621 Mr. Charles G. Murphy

COL:

Oral History Research Office Box 20 Butler Library Columbia University New York, New York 10027 (212) 280-2273 Ms. Jeri Nunn

DTNSRDC:

Navy Laboratories Archives
Code 504
David Taylor Naval Ship Research and Development Center
Bethesda, Maryland 20084
(202) 227-1407
AUTOVON 287-1407
Dr. David K. Allison
Ms. C. Elizabeth Nowicke

LC:

Manuscript Collection Library of Congress Washington, D.C. 20540 (202) 287-5387

NADC:

Public Affairs Office, Code 701 Naval Air Development Center Warminster, Pennsylvania 18974 (215) 441-3067 AUTOVON 441-3067

NASM:

Records Management Division National Air and Space Museum Smithsonian Institution Washington, D. C. 20560 (202) 357-13133

NAVAIR:

Code 953
Naval Air Systems Command
Washington, D.C. 20360
(202) 692-7834
AUTOVON 222-7834
Dr. William J. Armstrong

NHC

Naval Historical Center Operational Archives Branch Bulding 57, Washington Navy Yard Washington, D.C. 20374 (202) 433-3170 AUTOVON 288-3224 (3172) Dr. Dean Allard Ms. Martha L. Crawley

NPRDC:

Code 303
Naval Personnel Research and Development Center
San Diego, California 92152
(619) 225-7450
AUTOVON 933-7424
Mr. Robert F. Turney

NRL

Historian, Code 2604 Naval Research Laboratory Washington, D.C. 20375 (202) 767-3419 AUTOVON 297-3419 Dr. John A. S. Pitts

NSWC:

Public Affairs Office, Code X02 Naval Surface Weapons Center Dahlgren, Virginia 22448 (703) 663-8154 AUTOVON 249-8154 NWC:

Code 3411 Naval Weapons Center China Lake, California (619) 939-2027 AUTOVON 437-2027 Mr. Leroy L. Doig III

NWCM:

Curator, Naval Historical Collection U.S. Naval War College Newport, Rhode Island 02840 (401) 841-2435 AUTOVON 948-2435 Dr. Evelyn Cherpak

MIT:

The Libraries
Institute Archives and Special Collections, Room 14N-118
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139
(617) 253-5688
Ms. Helen W. Samuels

RAD:

The Arthur and Elizabeth Schlesinger Library Radcliffe College Ten Garden Street Cambridge, Massachusetts 02138 (617) 495-8647 Ms. Anne D. Engelhart

USNA:

Special Collections
Nimitz Library
U.S. Naval Academy
Annapolis, Maryland 21402
(301) 267-2220
AUTOVON 281-2220
Ms. Alice Creighton
Ms. Pamela Sherbert

USNI:

U.S. Naval Institute Preble Hall Annapolis, Maryland 21402 (301) 268-6110 Ms. Susan Sweeney Ms. Tomi Johnson

ACRONYMS AND ABBREVIATIONS

Assistant Chief of Naval Operations ACNO ADM Admiral AEC Atomic Energy Commission Aeronautical Electronics and Engineering AEEL Laboratory AEW Airborne Early Warning Air Force Base AFB AIP American Institute of Physics AMAL American Medical Acceleration Laboratory Applied Physics Laboratory (Johns Hopkins) APL Advanced Research Projects Agency ARPA ASN Assistant Secretary of the Navy ASN(R&D) Assistant Secretary of the Navy (Research and Development) ASN(RES) Assistant Secretary of the Navy (Research Systems & Engineering) ASP All Altitude Spin Projectile ASROC Antisubmarine Rocket Antisubmarine Warfare ASW Advanced Technical Objectives Working Group ATOWG Bureau of Aeronautics BUAER BUBUDGET Bureau of the Budget Bureau of Medicine and Surgery BUMED BUPERS Bureau of Naval Personnel BUSHIPS Bureau of Ships BUWEPS Bureau of Naval Weapons CAPT Captain CDR, CMDR Commander CLPP China Lake Pilot Plant CHNAVMAT Chief of Naval Material CNM Chief of Naval Material CNO Chief of Naval Operations CO Commanding Officer Common Business Oriented Language COBOL COL Colone1 COMMO Commodore Commander, Naval Air Systems Command COMNAVAIR DARPA Defense Advanced Research Projects Agency DCNM Deputy Chief of Naval Material DCNM(D) Deputy Chief of Naval Material (Development) DCNM(L) Deputy Chief of Naval Material (Laboratories) Deputy Chief of Naval Operations DCNO DDRAT Director Defense Research and Technology DDRE Director of Defense Research and Engineering DIFAR Directional Finding and Ranging DLPDirector of Laboratory Programs DNA Defense Nuclear Agency Director of Navy Laboratories DNL DNSARC Department of the Navy Systems Acquisition Review Council

DOD Department of Defense
DON Department of the Navy

DRDT&E Director, Research, Development, Test and

Evaluation

DSARC Defense Systems Review Council

DTMB David Taylor Model Basin

DTNSRDC David W. Taylor Naval Ship Research and

Development Center

DUSRAT Deputy Under Secretary for Research and

Technology

EES U. S. Navy Engineering Experiment Station

EMB Experimental Model Basin

ENIAC Electronic Numerical Integrator and Computer

EOSS Electro-Optical Sensor System
FAA Federal Aviation Administration

FADM Fleet Admiral

FBM Fleet Ballistic Missile

FCRC Federal Contract Research Center

FOSS Fiber-Optic Sensor System

FY Fiscal Year

GAO General Accounting Office

GEN General

GUPPY Greater Underwater Propulsive Power

HIFRAG High Fragmentation

HQ Headquarters

IBM International Business Machines

IG Inspector General

IGY International Geophysical Year JASON a task force active in the 1970s

JPL Jet Propulsion Laboratory
LAAV Light Airborne ASW Vehicle
LAB Laboratory Advisory Board

LAMPS Light Airborne Multi-Purpose System

LC Library of Congress

LOFAR Low Frequency Analizing and Recording

LORAN Long Range Navigation
LST Tank Landing Ship
LTC Lieutenant Colonel
LTGEN Lieutenant General

LUS Laboratory Utilization Study

MAJ Major

MAT NAVMAT organizational code prefix

MDL Mine Defense Laboratory

MEL Marine Engineering Laboratory

MILCON Military Construction

MIT Massachusetts Institute of Technology

MK Mark

NACA National Advisory Committee on Aeronautics

NADC Naval Air Development Center
NAEC Naval Air Engineering Center
NAMU Naval Air Modification Unit
NAPC Naval Air Propulsion Center

NASA National Aeronautics and Space Administration Naval Applied Science Laboratory NAST. NASM National Air and Space Museum North Atlantic Treaty Organization NATO NAVAIR, NAVAIRSYSCOM Naval Air Systems Command NAVMAT Naval Material Command NAVORD, NAVORDSYSCOM Naval Ordnance Systems Command NAVSEA Naval Sea Systems Command NAVSEC Naval Ship Engineering Center NAVSTAR Navy Navigation Satellite NCEL Naval Civil Engineering Laboratory NCSL Naval Coastal Systems Laboratory NDRC National Defense Research Committee NEL Naval Electronics Laboratory NELC Naval Electronics Laboratory Center NHC Naval Historical Center NIF Navy Industrial Fund NMARC Navy and Marine Corps Acquisition Review Committee NMC Naval Material Command NOL Naval Ordnance Laboratory NOL C Naval Ordnance Laboratory (Corona) NOL W/O Naval Ordnance Laboratory (Whiteoak) NORC Naval Ordnance Research Calculator NORDA Naval Ocean Research and Development Activity NOSC Naval Ocean Systems Center NOTS Naval Ordnance Test Station NOTSNIK NOTS Satellite NPG Naval Proving Ground **NPRDC** Navy Personnel Research and Development Center NRAC Naval Research Advisory Committee NRL Naval Research Laboratory NSAP Navy Science Assistance Program NSF National Science Foundation NSRDC Naval Ship Research and Development Center NSSNF Naval Strategic Systems Navigation Facility NSTEP Navy Scientist Training Exchange Program NSWC Naval Surface Warfare Center NUC Naval Undersea Center NURDC Naval Undersea Research and Development Center NUWRES Naval Underwater Weapons Research and Engineering Station NUSC Naval Underwater Systems Center Naval Underwater Sound Laboratory NUSL NWAG Naval Warfare Advisory Group NWC Naval Weapons Center NWCM Naval War College Museum NWL Naval Weapons Laboratory OASD Office of the Assistant Secretary of Defense ODDR&E Office of the Director of Defense Research &

Engineering

OIC Officer in Charge OMB Office of Management and Budget ONR Office of Naval Research OPNAV Office of the Chief of Naval Operations OSD Office of the Secretary of Defense OSRD Office of Scientific Research and Development PERT Program Evaluation Review Technique PRFA Personnel Research Field Activity RADM Rear Admiral REAC Research Calculator RCA Radio Corporation of America R&D Research and Development RDT&E Research, Development, Technology and Evaluation REFLEX Resources Flexibility RIF Reduction in Force SARAH Semi-Active Radar Homing SARS Selected Acquisition Reporting System SDRV Submarine Deep Rescue Vehicle SECDEF Secretary of Defense SECNAV Secretary of the Navy SER Shore Establishment Realignment SES Senior Executive Service SES Surface Effect Ships SOFAR Sound Fixing and Ranging SOLRAD Solar Radiation SUBROC Submarine Rocket SWPP Salt Wells Pilot Plant SYSCOMS Systems Commands Test and Evaluation T/E TD Technical Director UCLA University of California, Los Angeles USA United States Army USAF United States Airforce USDR&E Under Secretary of Defense Research and Engineering USNA United States Naval Academy USNI United States Naval Institute USNR United States Navy Reserve VADM Vice Admiral VLAP Vietnam Laboratory Assistance Program V/STOL Vertical Short Take-Off and Landing Aircraft Women Accepted for Voluntary Emergency Service WAVES

NAME INDEX

Abrams, Robert, 1 * [1] Adams, A. J., 2* Adams, SECNAV Charles F., 139 Adkins, Dr. John, 3* Agnew, Harold, 4* Allen, Dr. Robert C., 159, 173 Alpers, Frederick C., 4* Alter, Dr. Dinsmore, 17 Alvarez, Dr. Luis W., 5* Amlie, Dr. June, 6 Amlie, Dr. Thomas S., 6*, 7, 41, 43, 153, 200 Anderson, Dr. Carl, 145 Anderson, Evan, 8* Andrews, CAPT Albert, 1, 192 Andrews, Dr. Dan, 9* Andrews, RADM B. F., 9* Appleton, Robert, 160 Argora, Larry, 137 Armitage, LT John M., 54, 197 Ashworth, VADM Frederick L., 9*, 10*, 33, 73 Aslo, Izzy, 211 Bagley, Jim, 90 Bagley, VADM David H., 154, 218 Bainbridge, Dr. Kenneth Tompkins, 11*, 20 Baker, Walter L., 12* Baldwin, Dr. Ralph B., 2+ Ballentine, ADM John Jennings, 12* Barnaby, CAPT Ralph, 13* Bastedo, George, 14* Baum, Dr. William A., 13* Beach, CAPT Edward Latimer, 16* Beach, Dr. Eugene H., 15* Beahan, CAPT, 11 Beckmann, CAPT Alcorn G., 16*, 54 Bennett, Dr. Ira, 98 Bennett, Dr. Ralph, 15, 77, 116 Bennett, RADM Rawson, 57, 83, 165 Bergstralh, Thor, 17* Berman, Dr. Alan, 18*, 19*, 36, 48, 90, 148 Bernard, Charles W., 180 Beshany, VADM Philip A., 19* Birch, Dr. A. Francis, 20* Bittenger, Charles, 95 Black, CAPT Robert G., 21* Black, Dr. K. C., 113 Blandy, ADM George, 10, 35, 72, 99, 160, 169, 220 Blifford, I.H., 17 Blood, Dr. Howard, 21+

^[1] An asterisk indicates that the person was interviewed, and the page that the interview begins on.

Bodenburg, John, 22* Boeing, William, 214 Bohr, Dr. Nils, 119 Bolt, Dr. Richard Henry, 23* Bondi, Hermann, 79 Bourland, Langford, 103 Bowen, ADM Harold G., 139 Bowen, Dr. Edward G., 23* Bowen, Dr. Ira S., 25*, 149 Bowen, Harold G., Jr., 25* Bowen, Ike, 60 Bowen, VADM Harold G., 24*, 25 Bowyer, Dr. C. Stewart, 26*, 39 Bradbury, Dr. Norris E., 26* Bradbury, Dr. Norris E., 169, 216, 220 Bramble, Dr. Charles C., 27*, 136 Braun, RADM Boynton L., 28* Braun, Wernher von, 63, 111, 163 Breslow, Arthur, 28* Brode, Dr. Wallace C., 16, 29*, 142, 201 Brooks, Dr. Harvey, 30* Brooks, Dr. Lester, 2 Brown, Dr. Frederick W., 97, 200 Brown, Dr. Ira Sprague, 82 Brown, Paul, 58 Brundage, Dr. Everett G., 37, 58, 63 Bryan, Dr. Glenn L., 30*, 58, 154, 177 Bucaro, Joe, 48 Buckley, William H., 138 Burke, ADM Arleigh A., 2*, 31*, 83 Burke, William, 136 Burns, Dr. Robert O., 32*, 183 Burroughs, ADM Sherman E., 32, 34*, 50, 53, 54, 60, 74, 81, 82, 99, 118, 145, 156, 166, 168, 187, 188, 197 Burroughs, Kay (Mrs. Sherman E.), 32 Burroughs, Martha Parsons, 66 Burroughs, Mrs. Robert (former Mrs. William S. Parsons), 33* Bush, Dr. Vannevar, 16, 29, 149, 202 Byrnes, CAPT James, 35, 50, 160, 167, 168 Byrum, E. T., 35* Camp, Victor W., 35* Carmondy, Hazèl, 124 Carome, Dr. Edward F., 36*, 48 Carstater, Dr. Eugene D., 37*, 58, 176 Cartwright, D: . Frank W., 7*, 146 Chaffee, John, 65 Chaplin, Dr. Harvey R., 61 Chase, ADM John Dawson, 180 Christman, Albert B., 37* Chubb, Dr. Talbot A., 38*, 103 Clarkin, CAPT James J., 176 Clearwater, Walter, 121 Cleeton, Dr. Claud E., 39*, 90, 103

Clement, Lewis M., 2* Clements, William, 201 Cody, Harold, 211 Cohen, Dr. Charles J., 136 Collins, Dr. John J., 31, 36, 40*, 63, 154, 177, 218 Colvard, Dr. James E., 41*, 180, 212 Compton, Karl, 11 Connolly, VADM Thomas, 42*, 65 Cooper, Dr. Eugene P., 42* Couperus, Pierce G., 43* Cox, ADM, 195 Cozzens, Ernest G., 43* Crary, Dr. Albert P., 44* Crawford, Jack A., 7*, 127, 199 Crook, Mary Charlotte, 1, 159 Crosbie, Richard, 44* Crosley, Al, 139 Cummins, Dr. William E., 45*, 46* Currie, Dr. Lauchlin M., 2 Custer, CAPT Benjamin Scott, 47* Daley, Dr. John, 147 Davies, RADM Thomas, 179 Davis, Dr. Charles M., 36, 47* Davis, Tommy, 139 Dawson, Dr. Leo H., 95 de los Santos, Dr. Socrates, 61 Dement, Roger, 184 Diehl, CAPT Walter S., 48*, 61 DiPol, C. John, 49* Donaldson, Earl J., 7* Donovan, Jack, 48 Doolittle, GEN James H., 11 Driggs, Ivan, 113 Drummeter, Dr. Louis F., 49* Dudek, Dr. Edward, 31, 106 Duncan, ADM Donald, 50* Duncan, CAPT James, 32, 35, 50*, 160, 188 Duncan, Dr., 15 Dunlap, Jack, 51* Ebaugh, Paul, 51* Ebbert, CAPT Edwin L., 52* Eggert, CAPT Ernest F., 172 Eisenhower, PRES Dwight D., 219 Ekas, RADM Claude P., 52* Ellis, Dr. Emory L., 25, 32, 53*, 54*, 60, 206 Ellis, Marion (Mrs. Emory L.), 54* Ellsworth, William, 46, 138 Elster, Dr. Richard, 177 Entwistle, RADM Frederick I., 54* Etheridge, CAPT Melvin R., 56 Eyster, Dr. Eugene H., 55* Fallgatter, Calvin J., 56* Farrell, GEN, 10

Ferguson, Mary, 56*, 57* Fermi, Enrico, 152 Fields, Dr. Victor, 31, 58* Fischer, LTC Frank, 195 Fitzpatrick, William, 59* Fletcher, Dr. Robert C., 4* Foladare, Dr. Joseph, 59* Foley, Dr. Henry M., 64 Ford, Curry, 2* Forrestal, SECNAV James, 29, 92, 99, 185, 201, 214 Foster, Dr. John S., 77, 121, 132, 153, 165 Fowler, Dr. William, 25, 59, 60*, 82, 119, 156, 202 Franck, Dr. James, 63 Franke, William B., 83, 198 Freeman, ADM Rowland G., 22, 87 Fresh, J. Norman, 61* Friedman, Dr. Herbert, 62*, 79, 104, 111, 134, 139, 191 Friedman, Sidney, 58, 63* Frosch, Dr. Robert A., 1, 24, 40, 64*, 65*, 72, 77, 88, 121, 151, 153, 154, 158, 165, 181, 200 Froude, William, 115 Fuller, Clarissa Parsons, 33, 65* Furlong, RADM William Rea, 28 Furth, RADM Frederick R., 66*, 83 Galantin, ADM Ignatius J., 148 Gardner, Trevor, 59 Gates, SECNAV Thomas S., 67* Gebhard, Dr. Louis A., 68*, 103, 139 Gertler, Morton, 172 Giallorenzi, Dr. Thomas G., 48, 67* Glass, Dr. Edward, 8, 178 Gleissner, Gene H., 136 Gleiter, Werner, 68+, 94 Gloeckler, Fred W., 113 Goddard, Dr. Robert, 100, 189, 195 Goddard, Mrs. Robert, 69* Gold, Thomas, 79 Goldberg, Dr. Leo, 191 Goss, Dr. Wilbur, 70* Gould, Al, 174, 206 Gould, Gerald, 70* Gouldman, Harold M. Jr., 71* Gralla, VADM Arthur R., 1, 41, 71* Granum, RADM Alfred M., 72* Gray, R. Flanagan, 45 Grodsky, Jim, 72* Groves, GEN Leslie, 10, 11, 33, 73*, 129 Guggenheim, Harry, 115 Gunn, Dr. Ross, 95 Guthrie, Dr. Robert C., 73*, 139 Habicht, Frank, 74* Haff, CAPT William B., 75* Hafstad, Dr. Lawrence R., 2*, 75*

Hagen, Dr. John P., 103, 104 Hale, George Ellery, 202 Haley, Andrew, 166 Hall, Dr. John L., 76* Halsey, ADM William F., 35 Hardy, CAPT John I., 76*, 98, 117* Hardy, Dr. James D., 45, 194 Harris, ADM William L., 22, 87 Hartmann, Dr. Gregory, 15, 77*, 116, 159 Harwit, Dr. Martin, 78*, 79* Hattabaugh, William R., 80* Havens, Dr. Ralph J., 17, 80* Hay, Marley Fotheringham, 81+ Hays, Burrell, 157 Hayward, ADM John T., 10, 35, 50, 54, 74, 81*, 82*, 83*, 84*, 128, 156, 160, 197, 198, 201 Hedrick, CAPT David, 169, 189, 220 Heller, CDR S. K., 159 Henderson, J., 85* Henifin, CAPT Edward E., 48, 85*, 90 Herget, Dr. Paul, 86* Herron, RADM Edwin W., 147 Hewins, Dr. Lyman, 116, 159, 172 Hickman, Dr. Roy Scott, 60 Hickman, Roger, 30 Highberg, Dr. Ivar E., 86+ Hill, Johnny, 46 Hillyer, Robert, 22, 80, 87*, 89, 120, 148, 212, 213 Himes, Allen W., 88*, 89* Hollings, Anthony J., 90 * Hollingsworth, Dr. Guilford L., 98 Holmes, Julian, 103 Hooker, Ruth, 91* Hooper, ADM Edwin B., 91*, 92* Hooper, RADM Stanford C., 220 Hopper, COMO Grace Brewster (Murray), 93. Horton, Dr., 96, 122 Howard, Jim, 68, 94* Huang, Theodore S., 1, 89 Hughes, David, 1 Hulburt, Dr. Edward O., 95*, 105, 134, 139, 168, 191 Hunsaker, Jerome Clarke, 96+ Hunt. F. L. "Pete", 96 * Hunt, Prof. Ted, 30 Hunter, Dr. Hugh, 97*, 98*, 142 Hussey, VADM George F., 2*, 16, 29, 34, 54, 82, 98*, 99*, 127, 160, 171, 188 Hustvedt, VADM Olaf M., 100* Ide, John, 97 Jackson, VADM Andrew McBurney, Jr., 100+ James, Richard, 101+ Janes, Charlie, 46 Jennison, James H., 101*, 102*

Joakim, W. F., 137 Johnson, ADM Roy L., 106* Johnson, Charles Y., 103*, 104* Johnson, Dr. Ellis, 216 Johnson, Dr. Frances Severin, 105* Johnson, Dr. Gerald, 1, 8, 65, 72, 77, 88, 120, 148, 153, 174, 181, 192 Johnson, Everatt Emmil, 159 Johnson, Robert, 138 Jones, Dr. Earl, 106*, 130 Kaiser, Herman F., 63 Karle, Dr. Isabella Lugoski, 95 Karle, Dr. Jerome, 95 Karman, Dr. Theodore von, 69, 166, 172 Keach, CAPT Donald, 148 Keener, Charles E., 107* Kegley, Larry, 103 Keil, Dr. Alfred H., 61, 108*, 159, 172, 173 Kell, ADM Claude O., 159 Kelly, CAPT James F., 108+ Kelly, Jim, 138 Kemper, Dr. William, 184 Kendig, Dr. Paul M., 109* Kennedy, PRES John F., 3, 181 Kidd, ADM Issac C., Jr., 120, 121, 128, 179, 192 King, FADM Ernest, 12, 28, 137, 156, 214 Kinnear, RADM George E. R., 154, 218 Kirk, ADM Alan Goodrich, 110* Kirschke, Jim, 214 Kistiakowsky, Dr. George B., 29 Kitterman, Warren, 214 Kleback, Thomas, 1, 120 Klein, Dr. Elias, 90 Knemeyer, Franklin H., 146 Knudson, Dr. Vern, 23, 149 Koesey, Calvin, 110* Kondracki, Henry, 78* Krause, Dr. Ernst H., 17, 104, 105, 111*, 163, 191 Kron, Dr. Gerald Edward, 112* Krutter, Dr. Harry, 68, 112*, 113* Kunz, D. A., 114* LaBerge, Dr. Walter, 7, 98, 142, 146, 200, 209 Lahr, CAPT John Jude, 87 Laird, SECDEF Melvin, 65, 181 Land, ADM Emory S., 115., 211 Landsdown, Mrs., 100 Landweber, Dr. Louis, 46, 115*, 172 Langenbeck, Earl H., 116* Langille, CAPT John, 1, 89 Lauritsen, Dr. Charles C., 5, 25, 34, 35, 54, 59, 60, 76, 81, 82, 117*, 118*, 119, 127, 145, 156, 160, 167, 188, 202, 216 Lauritsen, Dr. Thomas, 60, 119*

Law, Howard, 89, 119*, 144 Lawson, Dr. Joel, 18, 88, 89, 120*, 128, 148, 153, 159, 181 Lazo, John, 143 Leary, VADM Herbert F., 28, 216 Lewis, Russell, 121* Libby, VADM R. E., 83 Lindsay, John, 63 Lindvall, Dr. Frederick C., 102 Livermore, Cliff, 56 Lockhart, Dr. Luther, 122* Lockwood, VADM Charles A., 123* Loeb, Dr. Leonard, 169, 170 Longwell, Paul, 55 Lyddane, Dr. Russell H., 124*, 180 Malina, Dr. Frank J., 111 Marcy, ASN (R&D) H. Tyler, 177 Maris, Harry, 95 Martell, VADM Charles B., 24, 129* Marten, William H., 130* Mason, Dr. Max G., 202 Mason, Russell, 68 Masterson, VADM Kleber S., 130* McCain, ADM John S., 166 McClaren, CDR, 53 McCrary, John A., 61 McDowell, Perceval E. (Pete), 147 McDowell, Rensler, 123* McEntee, CAPT William, 172 McKibbin, Mrs. Joseph (Dorothy), 124+ McLaughlin, Jack, 56 McLaughlin, R. B., 163 McLean, Dr. William B., 5, 6, 7, 10, 15, 41, 42, 43, 49, 51, 77, 80, 87, 97, 98, 125, 126*, 127*, 128*, 142, 175, 178, 199, 200, 201, 205, 206, 207, 208, 209, 210 McLean, Edith LaVerne (Mrs. William B.), 125, 126*, 210 McLean, Jack, 126 McLean, Mark, 126 McMillan, Dr. Edwin M., 129* McNamara, SECDEF Robert S., 10, 24, 52, 65, 77, 83, 92, 113, 133, 153, 158, 165, 178, 192, 198, 205, 219 McPherson, Dr. Herbert G., 2 Menzel, Dr. Donald, 191 Meyer, Irwin, 23 Meyers, Wesley W., 131* Michaelis, ADM Frederick, 148 Michelson, Dr. Albert A., 99, 168, 202 Miller, Laymon N., 132* Millikan, Dr. Robert A., 25, 59, 202, 204 Minter, Jerry, 2* Mitchell, GEN William, 100 Mitscher, ADM Marc, 156 Moffett, ADM William A., 214 Moran, VADM William J., 132*

Morse, Dr. Robert W., 18, 121, 148 Morton, RADM Thomas, 133* Moses, William, 35 Moulton, Prof. Forest Ray, 99, 188 Mumma, RADM Albert G., 116, 173 Mutch, Warren, 90 Nash, Dr. Harold, 96 Nastromeno, John, 213 Newell, Dr. Homer E., 104, 134* Niedermair, John Charles, 135* Niemann, Ralph A., 135* Nitze, SECNAV Paul, 64, 72, 205 Noel, Lee, 90 Norley, William, 116 Noyer, Arthur, 202 Nutt, Mr. Harold V., 136* O'Neill, William, 137* Offenhauser, William, 2* Oppenheimer, Dr. Robert, 5, 10, 11, 27, 33, 66, 73, 125, 129, 152, 185 Owen, RADM Thomas B., 90, 138* Page, Dr. Robert Morris, 139* Paisley, Dr. Melvyn R., 212 Parham, CAPT John S., 158 Parker, CAPT Donald F., 177 Parrish, CAPT David, 1, 89, 148 Parsons, Clare, 66 Parsons, Clarissa, 66, 140 Parsons, Critchell, 66, 140 Parsons, Harry R., 140* Parsons, Martha, 125 Parsons, Mrs. William S., 33. Parsons, RADM William S., 2, 4, 5, 7, 10, 11, 20, 27, 29, 33, 34, 55, 66, 70, 72, 74, 81, 82, 92, 99, 118, 119, 125, 129, 140, 149, 164, 167, 169, 171, 182, 185, 188, 189, 220 Patton, Harold, 206 Pearce, John, 2* Pehrson, Gordon, 141. Peterkin, Ernest W., 141* Petersen, ADM Forrest Silas, 1/2* Philpott, LaVerne, 139 Pickering, Dr. William H., 111 Pielemeier, Dr. Walter H., 109 Plain, Dr. Gilbert, +42* Polin, Jerry, 143*, 144* Polis, Dr. David, 143 Pollak, George, 144. Pollock, CAPT Thomas, 145*, 146*, 156, 197 Poppin, CAPT Jack R., 45 Porter, Henry, 70* Potter, Russell, 59 Powell, Dr. Alan, 173, 190 Powers, Kenneth, 146.

Press, Frank, 64 Pressly, Eleanor, 103 Price, D. George, 21, 31, 36, 37, 40, 58, 63, 130, 147*, 176 Printy, Rich, 157 Priori, Dr. E., 66* Probus, Dr. James H., 18, 48, 89, 116, 120, 148+, 151, 154 Pryor, CAPT William L., 97, 149+ Purcell, D., 150* Purnell, RADM William R., 73 Quarles, Gilford G., 150* Rabi, Isidor I., 64, 152, 217 Rabinowitz, Leo, 116 Raborn, VADM William F., Jr., 77, 151. Ramras, Eugene M., 151*, 154, 218 Ramses, Dr. Eugene, 36, 63 Ramsey, Dr. Norman, 4, 10, 29, 152* Ramsey, RADM DeWitt, 82 Raney, Dr. William, 72, 152*, 158 Reed, Edith, 103 Rees, Mina, 153. Regan, Dr. James J., 40, 109, 154*, 177 Reich, VADM Eli T., 155* Renard, RADM Jack C., 60, 145, 156* Renne, Clarence J., 157+ Rexroth, John, 128, 157. Reynolds, Dr. Melvin F., 184 Rich, Harry L., 158* Richardson, CAPT Holden C., 61 Richmond, CDR John, 16, 32, 35, 56, 74, 160* Ricketts, COMO Myron V., 161*, 190 Rickover, ADM Hyman, 16, 19, 150, 172 Riffolt, Nils, 27 Riggs, Leroy, 5 Rigney, Dr. Joseph, 31, 154 Rimland, Dr. Bernard, 130 Rivero, ADM Horacio, 10, 92, 93, 165, 192 Roach, James, 161* Robert L. Hansen, 52* Roberts, Dr. Walter Orr, 191 Robinson, ADM Samuel M., 162*, 211 Robinson, Dr. Preston, 2 Robinson, K. H., 117* Roman, Nancy Grace, 162* Rosen, Milton, 17, 104, 163* Rostker, Dr. Bernard, 177 Rothman, Dr. Samuel, 77, 192 Roy, Dr. Max, 164* Ruble, ADM W. J., 217 Ruckner, RADM Edward A., 164*, 165* Russell, ADM James S., 156, 166. Russell, Scott, 115 Ryland, Robert, 136 Sabin, Palmer, 167

Sagdahl, John, 167* Sage, Dr. Bruce, 16, 55, 59, 60, 97, 142, 160, 167*, 202, 207 Sam, Dr. Albert, 172 Sams, Gerald R., 14 Sanderson, Dr. John A., 168* Sandquist, CAPT Oscar, 160, 168* Sapp, Earl, 90 Saunders, CAPT marold E., 46, 61, 116, 135, 159, 172 Sawyer, Dr. Ralph A., 169*, 170*, 220 Saylor, William, 42, 102, 114 Schab, Henry, 138 Schein, Prof. Marcel, 111 Schneider, RADM R. J.: 170* Schoeffel, RADM Malcom F., 35, 99, 171* Schoenherr, Dr. Karl E., 46, 115, 171* Schoman, Dr. Charles M., 172* Schreiber, J. Raymond, 7* Schuyler, CAPT Michael, 99, 189 Schuyler, RADM Garret Lansing, 28 Schwede, Harold, 2* Schwinger, Dr. Julian S., 111 Sette, Dr. William J., 173* Sewell, Robert G. S., 174* Seymour, Dr. Harry R., 176* Seymour, VADM Ernest R., 175*, 176* Shajenko, Peter, 48 Sheehy, Myles, 177* Shenk, Dr. John H., 97 Sherwin, Dr. Chalmers, 3. 8, 77, 128, 153, 177*, 181, 192, Shugg, Carleton, 178* Sides, ADM, 182 Sikorsky, Igor, 214 Sims, ADM William, 211 Sjoholm, Dr. Allan A., 21, 31, 58, 177, 218 Skinner, COL, 60 Smith, Bernard, 41, 179*, 180* Smith, Charles P., 7* Smith, Chuck, 7, 146 Smith, Clane, 137 Smith, Dr. Robert, 154 Smith, Fred, 43 Smith, Howard, 1, 18, 120, 181*, 192 Smith, VADM Levering, 92, 97, 131*, 207 Smith, Watt, 137 Smitley, Charles Raymond, 182* Smyth, Henry D., 11 Snyder, RADM J. Edward, 183* Spangenburg, George, 183* Sprague, ADM Thomas L., 130 Sprague, Robert C., 2* St. Denis, Manley, 46, 172

Stark, ADM Harold R., 189 Stone, Dr. Harris B., 183* Stoner, Donald W., 184* Strand, Dr. Kai Aa., 185* Strasberg, Dr. Murray, 173 Strauss, Lewis L., 76 Strauss, RADM Louis L., 185* Stuhlinger, E., 63 Stump, ADM Felix Budwell, 186* Sullivan, ADM William, 186* Sweeney, MAJ Charles W., 10, 11 Swiggum, George, 89 Switzer, VADM W. G., 82, 160, 201 Sykes, Mrs. James, 187 Sykes, RADM James B., 16, 29, 54, 82, 160, 187*, 197, 201 Szilard, Dr. Leo, 11 Tanczoz, Dr. Frank I., 158 Tase, Johnny, 115 Taylor, ADM Henry, 211 Taylor, Dr. A. Hoyt, 95, 103, 139, 217 Taylor, RADM David W., 135, 137, 172 Teller, Dr. Edward, 1 Temple, RADM H. B., 82 Thompson, Arthur, 187* Thompson, Dr. Louis T. E., 7, 10, 16, 27, 28, 29, 33, 34, 42, 44, 51, 54, 55, 69, 82, 87, 97, 99*, 102, 118, 127, 128, 160, 169, 170, 171, 175, 180, 182, 188*, 189*, 200, 204, 207, 209, 220 Thorne, George, 116 Tibbets, COL Paul, 5, 10, 73 Tibbitts, CAPT Barrick F., 190* Tizard, Henry, 203, 204 Toftoy, BG Holger N., 111 Tolman, Dr. Richard C., 202 Tombaugh, Clyde, 17, 163 Tousey, Dr. Richard, 17, 95, 104, 105, 111, 190* Towle, CAPT Bernard, 1, 120, 181, 191*, 192* Tremblay, Harold, 113, 193*, 194* Trexler, James Hugh, 195* Trotter, Dr. Herbert, 2* Truax, CAPT Robert, 195* Truscutt, Starr, 61 Tubman, Benjamin, 184 Turney, Robert F., 130 Tuve, Dr. Merle, 2, 55, 70, 76, 99, 216 Upgren, A., 196* Van Allen, Dr. James, 191, 196* Van Swearingen, CAPT Earl K., 130, 147 Vieweg, RADM Walter V. R., 74, 201 Vincent, CAPT Manuel da Costa, 137 Volmut, Rosemary, 1 Vossler, RADM Curtis F., 197* Wakelin, Dr. James H., 165, 198*, 205

Walker, Eric A., 109, 199* Walker, John, 136 Wallace, Dr. Raines, 31 Wallace, John D., 69 Ward, ADM A. G., 93 Ward, Dr. Newton E., 7*, 127, 199*, 200* Warner, Dr. Arthur H., 16, 142, 200* Waterman, Dr. Peter, 90, 201* Watkins, ADM James, 176 Watson, Clement, 202* Watson, Dr. Earnest C., 59, 201* Watson-Watt, Sir Robert Alexander, 203* Waynick, Arthur H., 203* Weaver, Dr. Warren, 204* Webster, Dr. A. G., 69 Welford, Randolph, 204* White, ADM Alfred J., Jr., 22 White, Dr. Howard J., Jr., 205* Whitmarsh, David, 206* Whittle, ADM Alfred J., Jr., 89, 109, 148, 212 Wiegand, Dr. James, 206* Wilcox, Douglas, 144, 207*, 208* Wilcox, Dr. Howard A., 7, 146, 208*, 209*, 210* Willey, Thomas, 210* Williams, ADM Henry, 211* Williams, ADM John G. Jr., 212* Wills, James R., 212* Wilson, CAPT Eugene Edward, 214* Wilson, Dr. Haskell G., 6, 7*, 97, 98, 125, 142, 157, 158, 200, 205, 207, 208, 213* Windenburg, Dr. Dwight F., 159, 173 Windsor, Harry, 48 Winger, Dr. Ralph, 59 Wingo, Carl H., Jr., 214* Winnick, Robert L., 215* Wiskoff, Dr. Martin, 176 Wislicenus, Dr. George F., 215* Withington, RADM Frederick S., 216* Wolff, Dr. Irving, 217* Wood, R. W., 63 Worchesek, CAPT Robert R., 217* Word, Thomas J., 218* Wright, RADM Edward Alvey, 172 York, Dr. Herbert, 219* Young, Dr. Leo C., 103, 139, 219* Youngblood, Curtis, 220* Zahl, Dr. Harold A., 217 Zahm, Dr. Albert F., 61 Zimanski, CAPT Frank, 58 Zimmerman, LT, 160 Zisman, Dr. William A., 122, 221* Zumwalt, ADM Elmo, 19, 106, 121, 130, 132, 137, 147, 183,

SUBJECT INDEX

A-NEW Program, 143, 211 ASP Munition, 39 Acoustic Torpedos, 114 Acoustics Research, 12, 23, 30, 37, 43, 52, 67, 109, 123, 132, 150, 182, 188, 199, 203, 206, 216 Advanced Research Projects Agency, 18, 64, 65, 219 Advanced Technical Objectives Working Groups, 148 Aerial Bombing, 28, 100 Aerobee Rocket, 17, 39, 63, 78, 104, 105, 111, 163, 191, 197 Aerodynamics, 48, 61 Aerojet General Corporation, 207 Aeronautical Computer Laboratory, 194 Aeronautical Electronics and Electrical Laboratory, 113 Aeronautical Engineering, 186 Aeronautical Instruments Laboratory, 113 Aeronautics, 48 Aerospace Medicine, 45, 194 Aicraft Antennas, 107 Aiken Relay Calculator, 27 Air Cushion Vehicles, 61 Air Warfare Research Department, 107 Air to Air Missiles, 127 Airblast, 174 Airborne Early Warning Radar, 114 Airborne Early Warning Systems, 74 Airborne Height Finder, 114 Airborne Radar, 140, 203 Aircraft Armament Laboratory, 113 Aircraft Design, 48, 96, 101 Aircraft Launched Torpedos, 167 Aircraft Testing, 198 Airships, 96, 100, 172 Alamogordo, NM., 73 Albuquerque, NM., 164 American Institute of Physics, 26, 39 American Medical Acceleration Laboratory, 45 Annapolis, MD., 66, 165 Anti-Submarine Warfare Laboratory, 113, 211 Antiaircraft Missiles, 155, 156 Antisubmarine Aircraft, 69, 94, 101, 143, 211 Antisubmarine Rocket, 209 Antisubmarine Warfare, 69, 94, 101, 114, 143, 211 Antisubmarine Warfare Research, 94, 113 Antivehicle Weapons, 78 Applied Electrical and Electronics Laboratory, 107 Applied Mathematics Panel, 204 Applied Mechanics Laboratory, 159, 173 Applied Physics Laboratory, 2, 41, 85, 111, 158, 191, 197 Applied Research Laboratory, 12, 52, 109, 203 Armor, 184 Armor and Projectile Laboratory, 169, 170 Artillery, 3 Assistant Secretary of Defense (R&D), 83

Assistant Secretary of the Navy, 64 Assistant Secretary of the Navy (R&D), 8, 24, 121, 132, 165, 179.193,198,219 Astronomy, 26, 38, 62, 76, 78, 79, 81, 86, 112, 133, 134, 162, 163, 185, 196 Astrophysics, 14, 63 Atlas Missile, 78 Atmospheric Research, 79, 81, 104, 134, 164 Atomic Energy Commission, 78, 92, 100, 186, 216 Atomic Research, 33 Atomic Submarines, 16, 123 Atomic Weapons, 131 Austin Report, 205 Aviation Ordnance, 35 B-29 Bomber, 29 Baldwin Piano Company, 2 Ballistic Missile Submarines, 31, 51, 67, 131, 141, 151, Ballistic Research Laboratories, 133 Ballistic Trajectories, 194 Ballistics, 124, 184 Bat Missile, 14 Bat II Missile, 5 Bearings, 137 Bell Laboratories, 64, 217 Bell Report, 88 Berkeley, CA., 23 Billet Analysis, 130 Black Holes, 26 Blue Ribbon Defense Panel, 3 Boeing Airplane Company, 13, 45, 138 Bomb Sights, 204 Bombs, 184 Bombsights, 184 Bowdin, 17 Budget, 57 Bulbous Bow, 172 Bureau System, 38 Bureau of Aeronautics, 14, 50, 53, 61, 69, 83, 84, 100, 113, 115, 166, 186, 191, 192, 193 Bureau of Construction and Repair, 61, 172 Bureau of Engineering, 139, 162 Bureau of Medicine and Surgery, 45 Bureau of Naval Personnel, 21, 36, 37, 40, 58 Bureau of Ordnance, 1, 2, 14, 53, 72, 74, 78, 83, 84, 92, 99, 100, 102, 120, 145, 158, 159, 165, 166, 179, 182, 184, 188, 189, 192, 197, 198, 206, 216 Bureau of Ordnance Experimental Section, 100 Bureau of Ships, 1, 61, 115, 135, 137, 139, 159, 162, 172, Bureau of Standards, 14 Bureau of Weapons, 1, 72, 120, 131, 158 California Institute of Technology, 14, 34, 53, 54, 55, 59,

60, 82, 111, 118, 145, 156, 166, 168, 202, 215 Cambridge, MA., 30, 43 Camouflage, 95 Captured German Equipment, 123 Carderock, MD., 46, 61, 116 Cavitation, 46, 138, 173 Center of Excellence, 31, 58, 147 Centrifuges, 45 Chemical Coatings, 122 Chemical Research, 221 Chicago, IL., 66 Chief of Naval Development, 121, 179 Chief of Naval Material, 18, 36, 40, 72, 88, 89, 113, 121, 128, 132, 147, 158, 166, 179, 192, 193, 212 Chief of Naval Operations, 31, 53, 133, 153, 158, 184, 212 China Lake, CA., 6, 7, 10, 16, 25, 35, 41, 42, 54, 82, 87, 142, 145, 160, 175, 207, 213, 218 China Lake Pilot Plant, 167, 207 COBOL, 93, 94 Columbia University, 64, 69, 97 Commanding Officer, 13, 77, 84, 88, 109, 133, 160, 198 Commercial Activities, 161 Communications, 107 Comptroller, 57 Comptroller of the Navy, 57 Comptroller of the Office of Naval Research, 57 Computer Language, 93, 94 Computer Research, 193 Computer Simulation, 87, 193, 194 Computer Softwear, 194 Computers, 27, 45, 93, 94, 114, 136 Condor Missile, 6 Contracting, 117, 161 Convair Rocket, 163 Coordinator of Research and Development (Navy), 96 Cornell, 78, 79 Corona, CA., 88, 213 Coronagraphic Studies, 191 Corporate Plan, 120, 148, 212 Corvus Missile, 5 Cosmic Ray Physics, 105 Cosmic Ray Research, 17, 111 Cosmic Rays, 103, 111, 197 Crosley Corporation, 2 Dahlgren, VA., 12, 15, 27, 28, 33, 34, 41, 51, 55, 60, 69, 99, 110, 116, 133, 136, 165, 169, 180, 186, 188, 194, 216, 220 David Taylor Model Basin, 46, 48, 61, 108, 116, 135, 138, 159, 173 David Taylor Naval Ship Research and Development Center, 46, 61, 116, 137, 138, 159, 161, 173, 190 Deep Submersibles, 108 Defense Advanced Research Projects Agency, 47

Defense Logistics Agency, 143 Defense Spending, 216 Defense Systems Acquisition Review Council, 133, 148 Department of Defense, 198 Department of Defense Research and Engineering, 128 Department of Terrestrial Magnetism, 2 Department of the Navy Systems Acquisition Review Council, 148 Deputy Chief of Naval Material, 212 Deputy Chief of Naval Material (Laboratories), 1, 87, 89 Deputy Chief of Naval Operations (Development), 24, 83, 165, Deputy Chief of Naval Operations (Submarine Warfare), 19 Diesel Engines, 162 Digital Fuze Control, 87 Digital Systems, 39 Dillon Report, 205 Dillon Study, 1 Director, Plans & Programs, 173 Director of Defense Research and Development, 121 Director of Defense Research and Engineering, 8, 24, 78, 83, 166, 178, 193, 198, 219 Director of Laboratory Programs, 8, 18, 65, 153, 181 Director of Navy Laboratories, 1, 8, 18, 24, 41, 65, 78, 87, 88, 89, 112, 120, 121, 128, 148, 153, 158, 181, 192, 193, 212 Director of Research, Development, Test & Evaluation, 184 Director of Technology, 173 Dove Missile Project, 14, 199 Dynasoar, 111 Eagle Missile Project, 114 Eastman Kodak Company, 2 Eaton Canyon, CA., 25, 53, 59 Electric Ship Propulsion, 162 Electro-Optical Sensor System, 215 Electronic Counter-measures, 195 Electronic Equipment, 39 Electronic Warfare, 75 Electronics, 68 Electronics Research, 182 Elsie Project, 131 Engineering Duty Officers, 182, 190 Engineering Experiment Station, 137 ENIAC Computer, 194 Enola Gay, 11 Experimental Model Basin, 46, 48, 61, 116, 135, 172, 173, 186 Experimental Physics, 191 Explorer Program, 197 F-14 Project, 143 Fat Man Bomb, 29 Federal Aviation Administration, 6 Federal Contract Research Centers, 45, 120

Federal Power Commission, 163 Fiber Optic Hydrophone, 37, 48, 67 Fiber Optics, 37, 48, 67 Fiber Optics Sensor System, 37, 48, 67 FIDO Torpedo, 46 Fire Control, 14 Fire Control Computers, 27, 136, 194 Fire Control Laboratory, 127 Fire Control Radar, 139 Fire Control Systems, 114 Fiscal Management, 57 Five Year Plan, 173 Fleet Ballistic Missile Program, 124, 136 Fleet Ballistic Missiles, 31, 51, 67, 141, 151, 178, 202 Fleet Support Office, 161 Flying Boats, 47, 96, 106 Ford Aeronautics, 17, 80 Foundational Funding, 92 Franke Board, 57 Franklin Arsenal, 8 Ft. Huachuca, 184 Ft. Monmouth, 184 Ft. Sumner, NM., 66, 140 Fuel, 137 Funding, 57, 216 Furnes Report, 205 Fuze Research, 213 Fuzes, 184, 204 Gamma Rays, 103 Gemini Project, 194 General Accounting Office, 154 General Tire and Rubber Co., 55 Glass Report, 3 Goat Island, RI., 123 Goldstone Lake, CA., 25, 53, 59, 60, 119, 145, 157 Greater Underwater Propulsive Power, 47 Grumman F6F, 101 Guided Missile Computers, 193 Guided Missiles, 127 Guided Projectiles, 214 Gun Directors, 216 Gunblast, 174 Hadamard Transform Spectroscopy, 79 Harpoon Missile Project, 6, 53 Harvard University, 30, 43, 51, 97, 109, 182, 191, 199, 203 Helicopters, 101 Hermann Study, 1 High Energy Laser, 49 Hiroshima, Japan, 10, 11, 20, 73, 152 Hoover Company, 2 Hudson Laboratories, 19, 64 Hull Design, 46 Human Centrifuge, 45, 143, 194

Human Factors Engineering, 40, 143 Hurricane Project, 193 Hydroacoustics, 48 Hydrodynamic Research, 138 Hydrodynamics, 46, 61, 135, 138 Hydrodynamics Division, 173 Hydroelasticity, 138 Hydrofoils, 138 Hydrogen Peroxide Engines, 137 Hydromechanics, 46 Hydrophones, 37, 48, 67 Hyperbolic Navigation, 44 Independent Research/Independent Exploratory Development, 174 Indian Head, MD., 60 Infrared Astronomy, 79 Infrared Sensors, 191 Inspector General, 109 International Business Machine Company, 101, 136 International Geophysical Year, 44, 95, 104, 134, 197 Inyokern, CA., 10, 30, 34, 35, 51, 53, 55, 59, 60, 73, 75, 84, 145, 157, 164, 167, 169, 171, 187, 202 Ionospheric Physics, 104 Ionospheric Research, 104 JASON, 64 Jet Propulsion Laboratory, 111, 163 John Carroll University, 36, 47 Johns Hopkins University, 2, 63, 85, 95, 172 Johnson Space Center, 45 Johnsville, PA., 114 Julie Sonobuoy Project, 94 Kawai Rocket, 104 Korean War, 7, 125, 159 Krokura, Japan, 11 Laboratory Administration, 89 Laboratory Consolidations, 1, 22, 41, 88, 89, 117, 120, 121, 122, 178, 216 Laboratory Management, 1, 22, 85, 88, 89, 144, 173, 175, 178, 190, 201, 218 Laboratory Utilization Study, 148 Langley, VA., 61 Laser History, 117 Laser Research, 117 Laser Technology, 122 Lawrence Livermore Laboratory, 26 Libby Board, 83 Light Airborne ASW Vehicle, 143 Light Airborne Multi-Purpose System, 101, 143 Limpet Weapons, 78 Lockheed Corporation, 26 Long Range Navigation, 44 Long Range Planning, 108, 184, 190 Los Alamos, NM., 4, 5, 10, 11, 12, 20, 27, 29, 33, 55, 66,

73, 125, 129, 152, 164, 173 Low Frequency Radar, 94 Lubrication, 137 Lunar Research, 17 Lyman-Alpha, 191 Magnetospherics, 197 Manhattan Project, 4, 5, 10, 11, 12, 20, 27, 29, 33, 34, 47, 50, 55, 56, 66, 73, 82, 84, 105, 118, 125, 129, 131, 152, 160, 186, 188 Manpower Modeling, 107 Mansfield Amendment, 3, 64, 192 Marine Engineering Laboratory, 137, 173 Marine Science Council, 108 Martin Company, 199 Martin Marietta, 143 Massachusetts Institute of Technology, 12, 17, 76, 79, 93, 108, 115, 165, 172 Maverick Missile, 175 McQuay-Norris Corporation, 2 Mercury Project, 194 Metallurgy, 137 Meteorology, 80, 105 Michelson Laboratory, 87, 167, 171 Microwave Communications, 39 Microwave Radar, 140, 217 Military Construction, 190 Mine Mark 24, 172 Missile Research, 5, 6, 163 Missile Systems, 114, 193 Missiles, 50, 199 Model Basins, 46 Model Testing, 47, 62, 116, 172 Muroc, CA., 20, 29 Nagasaki, Japan, 10, 11, 73 National Academy of Science, 153 National Advisory Committee on Aeronautics, 50, 61, 80 National Aeronautics and Space Administration, 26, 64, 78, 79, 103, 104, 134, 163 National Air and Space Museum, 26, 39 National Bureau of Standards, 5 National Defense Agency, 115 National Defense Research Committee, 11, 23, 30, 60, 74, 118, 139, 152, 204, 215 National Science Foundation, 3, 8, 108, 153, 192 National Security Act, 57 Nautical Almanac, 86 Nautical Almanac Office, 86 Naval Air Development Center, 45, 61, 69, 94, 101, 107, 112, 113, 143, 144, 193, 194, 211 Naval Air Modification Unit, 74, 107, 193 Naval Air Systems Command, 101, 113, 142, 175, 176, 211 Naval Aircraft Factory, 84 Naval Architecture, 81, 96, 115, 135, 172, 211

Naval Aviation, 13, 28, 35, 47, 48, 50, 84, 186 Naval Aviation Development Center, 13 Naval Construction, 115, 187, 211 Naval Electronics Laboratory, 78, 177, 210 Naval Electronics Laboratory Center, 138 Naval Engineering, 162 Naval Gun Factory, 116, 124, 186, 216 Naval Gunnery, 214 Naval Material Command, 1, 48, 109, 144, 175, 212 Naval Mine Warfare, 78 Naval Observatory, 76, 86, 112, 185 Naval Ocean Systems Center, 9, 22, 102, 109, 120, 149, 208 Naval Ordnance Laboratory, 5, 15, 78, 84, 116, 124, 128, 180, 214 Naval Ordnance Research Calculator, 27, 136 Naval Ordnance Systems Command, 72, 87, 133 Naval Ordnance Test Station, 5, 7, 9, 10, 16, 25, 29, 30, 32, 33, 34, 35, 41, 42, 44, 51, 53, 54, 55, 56, 59, 60, 73, 74, 77, 82, 83, 84, 87, 92, 97, 98, 95, 102, 114, 118, 125, 126, 127, 128, 142, 145, 146, 156, 157, 160, 164, 168, 169, 171, 174, 175, 182, 187, 188, 197, 199, 200, 201, 202, 207, 208, 209, 210, 213 Naval Postgraduate School, 27, 165 Naval Proving Ground, 2, 12, 27, 28, 34, 51, 55, 60, 69, 71, 92, 99, 110, 124, 131, 136, 165, 169, 170, 184, 186, 188, 189, 194, 216, 220 Naval Research, 77, 156, 184 Naval Research Advisory Committee, 3, 21, 31, 130, 154, 177 Naval Research Laboratory, 14, 17, 18, 19, 26, 33, 36, 38, 39, 47, 49, 52, 63, 64, 67, 68, 74, 76, 78, 79, 80, 85, 90, 91, 95, 103, 104, 105, 111, 113, 117, 122, 134, 136, 139, 141, 149, 150, 161, 163, 168, 188, 191, 195, 197, 220, 221 Naval Sea Systems Command, 46, 190, 215 Naval Ship Research and Development Center, 45, 46, 61, 108, 120, 138, 159 Naval Ships Systems Command, 87 Naval Surface Weapons Center, 15, 41, 71, 116, 120, 133, 180.188 Naval Torpedo Station, 123, 206 Naval Undersea Center, 22, 102, 126, 127, 207, 210 Naval Underwater Sound Laboratory, 150 Naval Underwater Systems Center, 85, 97, 110, 120, 122, 215 Naval Weapons Center, 5, 6, 7, 10, 14, 22, 41, 42, 44, 49, 56, 75, 77, 80, 87, 92, 97, 98, 102, 125, 126, 127, 142, 145, 146, 153, 157, 175, 200, 207, 208, 209, 210, 213, 218 Naval Weapons Laboratory, 15, 116, 133, 136, 179, 180, 184, 216 Navigation, 17 NAVSTAR, 17 Navy Ballistic Missiles Committee, 131 Navy Industrial Fund, 3, 78, 91, 120, 128, 148, 159, 161, 179, 190, 212 Navy Personnel Research and Development Center, 21, 31, 36,

37, 40, 58, 63, 106, 109, 130, 147, 151, 154, 177, 218 Navy Personnel and Training Research Center, 151 Navy Research and Development, 38 Navy Science Assistance Program, 1, 120, 148, 159, 161 Navy Scientist Training Exchange Program, 144 Nebulae, 39 Neptune, 111 Neutron Stars, 26, 39 New London, CT., 69, 97 Newport, RI., 85, 97, 123, 206 Nike Missile, 191 Nike-Dan Rockets, 39 Norden Bombsight, 13, 28 North Atlantic Treaty Organization, 79, 166, 213 Northwestern University, 185 Notre Dame, 172 NOTSNIK, 209 Nuclear Missiles, 31, 51, 67, 131, 141, 151, 178, 202 Nuclear Powered Fleet Ballistic Missile Submarines, 31, 51, 67, 131, 141, 151, 178, 202 Nuclear Propulsion, 19, 123 Nuclear Reactors, 17 Nuclear Submarines, 20 Nuclear Test Detection, 64 Oberlin College, 79 Ocean Floor Modeling, 64 Ocean Technology, 108 Oceanography, 44, 91 Office of Naval Research, 3, 18, 31, 40, 48, 57, 58, 83, 91, 92, 93, 94, 103, 137, 138, 147, 153, 166, 184 Office of Scientific Research and Development, 2, 23, 82, 97, 118, 149, 215 Okinawa, Japan, 11 Operation Crossroads, 78, 160, 169, 174 Operation Paperclip, 111, 159 Optical Radar, 49 Optics, 63, 95, 168, 191 Optics Research, 95 Ordnance, 3, 27, 28, 84, 93, 99, 110, 124, 133, 165, 170, 184, 204, 214, 216 Ordnance Laboratories, 133 Ordnance Research, 30, 52, 83, 123, 182, 206 Ordnance Research Laboratory, 12, 52, 132, 150, 187, 206 Ordnance Training, 93 Orlando, FL., 69 PBY Flying Boat, 106 Pasadena Annex, 102, 145 Pasadena, CA., 34, 42, 103, 145, 167, 207 Pearl Harbor, HI., 3 Pennsylvania State University, 12, 52, 109, 132, 150, 187, 203, 206 Pensacola, FL., 12, 48, 50, 84, 186 Personnel Management, 152

Personnel Research, 21, 31, 36, 37, 40, 58, 63, 107, 109, 130, 147, 152, 154, 177, 218 Personnel Research Division, 21, 37, 40 Personnel Research Field Activity, 40 Petrel Missile, 14 Philadelphia Navy Yard, 143 Philadelphia, PA., 84 Philco-Ford Corporation, 143 Phoenix Missile Project, 114 Photoelectric Photometry, 76, 112 Photoelectric Sensors, 191 Photographic Emulsions, 191 Physics, 17, 63, 85, 111, 197 Polaris Missile, 198 Polaris Program, 31, 47, 51, 67, 107, 131, 136, 141, 151, 158, 159, 178, 202 Polaris Submarines, 20, 211 Polymers, 122, 211 Potsdam, East Germany, 11 Princeton University, 193 Program Evaluation Review Technique, 64, 141 Program Management, 148 Project 97,88 Project Artemis, 64 Project Media, 64 Project REFLEX, 3, 78, 121 Project Rainbarrel, 63 Project Sherwood, 197 Project Vela, 64 Projectiles, 184, 214 Propellers, 172 Proteus System, 211 Proximity Fuze, 3, 33, 34, 55, 70, 76, 99, 118, 182, 197, 202 Puma Missile Project, 5 Quantum Optics, 50 Radar, 39, 68, 74, 76, 103, 104, 107, 114, 123, 139, 152, 163, 165, 203, 217, 220 Radar Research, 12, 23, 33, 74, 140 Radiation Laboratory, 11, 152, 217 Radio, 150 Radio Communications, 68, 103 Radio Corporation of America, 74, 139, 193, 217 Radio Detection, 139, 220 Radio Telescope Research, 195 Radio Transmitters, 74, .03 Radiometry, 49 Range Finders, 204 Ranger Hard Lander, 17 REAC Computers, 193 Redstone Rocket, 163 Reduction in Force, 1, 148 Research, Development, Test, and Evaluation, 24

Research Management, 82, 85, 111 Research and Development, 57, 64 Research and Development Funding, 57 Ridenour Report, 140 Rocket Engines, 166 Rocket Propellents, 119, 202 Rocket Research, 75, 83, 100, 118, 119, 145, 156, 196, 207 Rocket Testing, 198 Rocket-Sonde, 63, 79, 105, 111, 134, 163 Rocketry, 17, 80, 104, 163 Rockoon, 63, 79, 197 Royal Navy, 91 Ryan Aircraft, 156 S-4 Submarine, 135 S-51 Submarine, 135 SARAH Missile Project, 6 SOLRAD Program, 63, 141 SSQ-15 Sonobouy, 69 SUBROC Missile Project, 78 Salt Wells Pilot Plant, 27, 55, 92, 164, 167, 187 Salvage, 135 San Diego, CA., 36, 40, 103, 109, 147, 207 Satellite Tracking, 87 Satellites, 63, 64, 104, 105, 191, 197, 209 Saturn Rocket, 104 Schlieren Laboratory, 36 Seakeeping, 47 Seaplanes, 106 Seaworthiness, 46 Secretary of Defense, 24, 131, 205 Secretary of the Navy, 67, 205, 219 Seismology, 64 Selected Acquisition Reporting System, 53 Senior Executive Service, 22 Sexual Discrimination, 57 Sherwin Plan, 3, 8, 128, 153, 192, 193, 205 Sherwin Report, 88 Ship Characteristics Board, 165 Ship Design, 135, 190 Ship Storage, 137 Shock, 91, 159, 173 Shock Hardening, 159 Shock Testing, 159 Shock and Vibration Centralization Activity, 159 Shore Establishment Realignments, 120 Sidewinder Missile Project. 6, 7, 14, 33, 44, 125, 126, 127, 147, 169, 174, 179, 199, 201, 210 Sikorsky, 101 Skyhook, 104 Skylab, 104 Society of Naval Architects, 46 Selar Physics, 105, 191 Solar Spectrograph, 17, 105

Solar Spectroscopy, 63 Solar X-Ray Radiation, 191 Solid State Physics, 30 Sonar, 30, 97, 122, 123, 150, 215 Sonobouy Research, 94 Sonobuoys, 69, 94, 143 Sound Fixing and Ranging, 44 Space Astronomy, 64, 111, 134, 163 Space Research, 95 Space Shuttle, 134 Space Simulation, 194 Space Simulation Chambers, 45 Space Surveillance System, 39 Space Telescope, 134 Spectrometry, 122 Spectroscopy, 122 Sproul Observatory, 185 Sputnik, 134, 197, 209, 219 Standards and Calibration Laboratory, 69 Stanford University, 36 Starfish, 17 Strain Gauges, 159 Structural Mechanics Department, 159 Structures Department, 159 Stump Neck, MD., 195 Submarine Communications, 107 Submarine Deep Rescue Vehicles, 137 Submarine Design, 81 Submarine Detectors, 118 Submarine Launched Ballistic Missiles, 31, 51, 67, 131, 141, 151, 178, 202 Submarine Propulsion Systems, 137 Submarine Rescue Chambers, 212 Submarine Research, 97, 127 Submarine Snorkels, 137 Submarines, 46, 135, 150 Sugar Grove, WV., 195 Surface Chemistry, 221 Surface Missile Systems Project, 155, 156 Surface to Air Missiles, 155, 156 Synthetic Lubricants, 221 Systems Analysis and Electronics Department, 107 Systems Approach, 45, 107, 114 Systems Commands, 38, 48, 78, 87, 88, 120, 121, 128, 148, 158, 179, 180, 193, 215, 220 Systems Engineering, 211 Talos Missile, 155, 156, 159 Tank Landing Ships, 135 Tartar Missile, 155, 156, 159 Task Force 97, 205 Technical Development Plan, 83, 179 Technical Director, 6, 7, 36, 41, 65, 88, 109, 113, 114, 124, 127, 133, 137, 154, 158, 173, 180, 208

Teflon, 221 Telemetry, 17, 103 Temple University, 143 Tentative Specific Organizational Requirement, 198 Terrier Missile, 14, 155, 156, 159 Testing and Development, 13 Thin Man Bomb, 29 Thompson Ramo-Wooldridge Corporation, 36, 48 Tinian, 4, 10, 20, 73, 152 Titanium, 137 Tizard Mission, 23, 74, 140 Torpedo Directors, 216 Torpedo Mark 13, 102 Torpedo Mark 43, 167 Torpedo Mark 48, 85 Torpedos, 46, 85, 114, 123, 132, 150, 167, 172, 206, 215 Trinity Test, 29, 152 Typhoon Project, 45, 114, 193 U. S. Air Force, 210, 213 U. S. Army, 2, 74, 79, 184, 185, 194 U. S. Army Chemical Corps, 79 U. S. Army Signal Corps, 74, 79, 95, 139, 182, 217 U. S. Naval Academy, 66, 93, 115, 196 USS BOSTON, 159 USS DRAGONET, 159 USS FLAGSTAFF, 138 USS HIGH POINT, 138 USS LEARY, 74, 140 USS LOS ANGELES, 20 USS NEW JERSEY, 215 USS NEW YORK, 140 USS NORTON SOUND, 47, 104, 197 USS OMAHA, 159 USS PLAINVIEW, 138 USS SHENANDOAH (ZR), 100 USS SQUALUS, 123 USS TEXAS, 140 USS THRESHER, 20, 64, 91, 137, 159 USS TROUT, 159 USS TUCUMCARI, 138 Ultra Violet Solar Spectroscopy, 191 Ultra-Violet Solar Spectrograph, 14 Underwater Explosives Research Division, 173 Underwater Sound Laboratory, 30, 43, 51, 69, 109, 182, 199, 203 Unilinear Navy, 3 University of Alberta, 105 University of California, 23 University of Michigan, 79, 80 University of Minnesota, 17 University of Pennsylvania, 45, 163, 194 Upper Air Rocket Research Panel, 191 V-2 Rocket, 14, 17, 63, 81, 95, 104, 105, 111, 134, 163,

191, 193, 197 Van Allen Radiation Belt, 197 Vanguard Program, 95, 105, 134, 136, 197 Variable-Angle Torpedo Launcher, 102, 114 Vertical Take Off and Landing Aircraft, 62 Very Low Frequency Communications, 107 Vibration, 91, 159 Victor Talking Machine Company, 217 Vietnam Laboratory Assistance Program, 110, 120, 137, 174 Vietnam War, 122, 125, 134, 174, 209 Viking Rocket, 17, 81, 104, 105, 111, 163 Walleye Missile Project, 127, 174, 199 Walleye II Missile Project, 5 Washington, DC., 40, 46, 116, 147, 187, 216 Washington Navy Yard, 15, 46 Waveform Generators, 46 Waveforms, 46 Weapons Development, 22 Weapons Systems, 31, 51, 67, 131, 141, 151, 155, 156, 178, 202 Weapons Systems Evaluation Group, 131 Webb Institute, 46 Westinghouse Corporation, 163 Whirlwind Project, 193 White Oak, MD., 15, 41, 116, 180, 216 White Sands, NM., 14, 17, 104, 105, 111, 163 Wind Tunnels, 61, 96 Woods Hole, MA., 173 Woods Hole Oceanographic Institute, 64, 91 X-15 Project, 194 X-Ray Astronomy, 26, 39, 191 Yerkes Observatory, 163, 185

2.7

INITIAL DISTRIBUTION

Copies		Copies	
2	DUS (R&AT)/A. Berman	4	NRL 1 Code 1001/T. Coffey
1	DSMC/Ft. Belvoir		1 Code 2600/E. Kirkbride 1 Code 2604/J. Pitts
1	ICAF		1 Code 2620
1	NDU	2	USNA 1 Library 1 Post of Mistory
1	OSD		1 Dept of History
2	ASN(RES)/J. Probus	1	NAVPGSCOL/Library
8	DNL 2 G. Morton 1 Code 05LC/A. Himes 3 Code 051/H. Law 1 Code 052/T. Huang	2	NAVAIRSYSCOM 1 Code 953/W. Armstrong NAVAIRDEVCEN 1 R. Buffum
	1 Code 053/G. Swiggum		1 Code 701
3	CONR 1 CNR 1 Historian 1 Library	2	NAVPERSRANDCEN 1 J. Tweedale 1 Code 303/R. Turney NAVWPNCEN
3	NAVHISTCEN 1 Code AR/D. Allard 1 Code AR/M. Crawley		1 B. Hays 1 Code 3411/L. Doig
	1 Library	1	NAVOCEANSYSCEN/R. Hillyer
2	USMA 1 Dept of History 1 Library	1 2	NAVCOASTSYSCEN/C. Dilworth NAVSWC/Whiteoak
1	USA CMH/DAMH-ZC		1 L. Hill 1 Code XO2
1	USA CMH/J. Bennett	1	NAVSWC/Dalhgren
1	USA MHI	2	NUSC 1 E. Messere
1	USA DARCOM/DRCDRA/Asst. Deputy for Sci. and Tech./R. Haley	1	1 Code 0213/D. Hanna NTEC/W. Lindahl
1	USA CERCOM/R. Cannon	3	NAVWARCOL 1 Museum/A. Nicolosi 1 Dept of History/J. Hattendorf 1 Naval History Collection/ E. Cherpak

Copies		Copies	
1	NNMC/MEDCOM-00D4/J. Herman		1 Archives Center 1 Eisenhower Institute for
1	NAVOBSY/Library/B. Corbin		Historical Research/ F. Pogue
. 1	HOMC-HD/Library/E. Englander	•	
1	NAVAVN-History/R. Grossnick	3	SI/NASM 1 Library 1 A. Needel
1	NAVFAC/V. Transano		1 D. DeVorkin
12	DTIC	1	U of California/Regional Oral History Office/Bancroft Lib
1	USAFA/DFH	1	Columbia U/Oral History Research
1	HO USAF/CHO	•	Office/Butler Lib
1	USAF/HRC/Albert F. Simpson Historical Research Center	2	Johns Hopkins U 1 Dept of History/R. Kargon 1 Applied Physics Laboratory
1	DOE/History Office		Archives
1	DOL/Historical Office	1	Harvard U/University Archives
3	LC 1 Sci. Tech Adv. 1 National Union List of Manuscript Coll/H. Ostroff	1	Eastern Kentucky U/Dept of History/L. Graybar U of Illinois/University
	1 Manuscript Division		Archives
4	NARS 1 Navy and Old Army Branch (NNMO) 1 Scientic, Economic, and Natural Resources Branch (NNFN)/S. Thibodeau 1 Motion Picture, Sound, and	3	U of Maryland 1 College of Library and Information Services/ F. Stielow 1 Dept of History/R. Friedel 1 McKeldin Lib
	Video Branch, (NNSM)/ M. Ciarlante 1 Franklin D. Roosevelt Lib	2	MIT 1 Institute Archives and Special Collections,
1	NAS		Room 14N-118/H. Samuels 1 Program in Science, Tech- nology and Society, Room
1	NASA/History Office		E51-228B/M. Smith
4	SI/NMAH 1 Division of Naval History 1 Dept of Social and Cultural History	1	Western Michigan U/University Archives
		1	U of Michigan/Engineering- Transportation Lib

Copies		Copies	Code	Name	
1	U of North Carolina/Wilson Lib	100	5211.1	Reports Distribution	
1	U of Oregon/Archives	1	522.1	TIC (C)	
-	_	1	522.2	TIC (A)	
1	U of Pennsylvania/Dept of History and Sociology of Science	2	701	P. Buchanan	
2	Pennsylvania State U 1 Lib 1 ARL				
1	Princeton U/Lib				
1	Radcliffe College/The Arthur and Elizabeth Schlesinger Lib				
1	Temple U/Urban Archives/F. Miller				
1	U of Washington/Library/E. Kukla	,			
1	American Institute of Physics				
1	United States Naval Institute/ Oral History Office				
1	Hoover Institution on War, Revolution, and Peace				
1	The Laser History Project/ R. Seidel				

CENTER DISTRIBUTION

Copies	Code	Name	
1	00		
1	01	A. Powell	
1	011	C. Schoman	
1	012.3	D. Moran	
1	05	R. Gauthey	
20	5040	D. Allison	
20	5040.1	C. Nowicke	

DTNSROC ISSUES THREE TYPES OF REPORTS

- 1 DTNSRDC REPORTS, A FORMAL SERIES, CONTAIN INFORMATION OF PERMANENT TECHNICAL VALUE. THEY CARRY A CONSECUTIVE NUMERICAL IDENTIFICATION REGARDLESS OF THEIR CLASSIFICATION OR THE ORIGINATING DEPARTMENT
- 2. DEPARTMENTAL REPORTS, A SEMIFORMAL SERIES, CONTAIN INFORMATION OF A PRELIMINARY, TEMPORARY, OR PROPRIETARY NATURE OR OF LIMITED INTEREST OR SIGNIFICANCE. THEY CARRY A DEPARTMENTAL ALPHANUMERICAL IDENTIFICATION.
- 3. TECHNICAL MEMORANDA, AN INFORMAL SERIES, CONTAIN TECHNICAL DOCUMENTATION OF LIMITED USE AND INTEREST. THEY ARE PRIMARILY WORKING PAPERS INTENDED FOR INTERNAL USE. THEY CARRY AN IDENTIFYING NUMBER WHICH INDICATES THEIR TYPE AND THE NUMERICAL CODE OF THE ORIGINATING DEPARTMENT, ANY DISTRIBUTION OUTSIDE DTNSRDC MUST BE APPROVED BY THE HEAD OF THE ORIGINATING DEPARTMENT ON A CASE BY CASE BASIS

Best Available Copy